CALL NO. 406

CONTRACT ID. 152103

JEFFERSON COUNTY

FED/STATE PROJECT NUMBER 056GR15P030-FD05 & FE01

DESCRIPTION PRESTON HIGHWAY (KY 61)

WORK TYPE ASPHALT RESURFACING

PRIMARY COMPLETION DATE 11/15/2015

LETTING DATE: April 24,2015

Sealed Bids will be received electronically through the Bid Express bidding service until 10:00 AM EASTERN DAYLIGHT TIME April 24,2015. Bids will be publicly announced at 10:00 AM EASTERN DAYLIGHT TIME.

NO PLANS ASSOCIATED WITH THIS PROJECT.

REQUIRED BID PROPOSAL GUARANTY: Not less than 5% of the total bid.

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PART V BID ITEMS

PART I

SCOPE OF WORK

ADMINISTRATIVE DISTRICT - 05

CONTRACT ID - 152103

056GR15P030-FD05 & FE01

COUNTY - JEFFERSON

PCN - MP05600611501
FD05 056 0061 004-011

PRESTON HIGHWAY (KY 61) (OMIT MP 8.095-8.280) (MP 4.832) FROM THE NORTH END OF NORTHERN DITCH BRIDGE EXTENDING NORTH TO GERNERT COURT (MP 10.963), A DISTANCE OF 06.13 MILES.ASPHALT RESURFACING

GEOGRAPHIC COORDINATES LATITUDE 38:11:11.00 LONGITUDE 85:43:27.00

PCN - MP05600611502
FD05 056 0061 004-011

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GEOGRAPHIC COORDINATES LATITUDE 38:11:11.00 LONGITUDE 85:43:27.00

COMPLETION DATE(S):

COMPLETED BY 11/15/2015 APPLIES TO ENTIRE CONTRACT

CONTRACT NOTES

PROPOSAL ADDENDA

All addenda to this proposal must be applied when calculating bid and certified in the bid packet submitted to the Kentucky Department of Highways. Failure to use the correct and most recent addenda may result in the bid being rejected.

BID SUBMITTAL

Bidder must use the Department's Expedite Bidding Program available on the Internet web site of the Department of Highways, Division of Construction Procurement. (www.transportation.ky.gov/construction-procurement)

The Bidder must download the bid file located on the Bid Express website (www.bidx.com) to prepare a bid packet for submission to the Department. The bidder must submit electronically using Bid Express.

JOINT VENTURE BIDDING

Joint venture bidding is permissible. All companies in the joint venture must be prequalified in one of the work types in the Qualifications for Bidders for the project. The bidders must get a vendor ID for the joint venture from the Division of Construction Procurement and register the joint venture as a bidder on the project. Also, the joint venture must obtain a digital ID from Bid Express to submit a bid. A joint bid bond of 5% may be submitted for both companies or each company may submit a separate bond of 5%.

UNDERGROUND FACILITY DAMAGE PROTECTION

The contractor is advised that the Underground Facility Damage Protection Act of 1994, became law January 1, 1995. It is the contractor's responsibility to determine the impact of the act regarding this project, and take all steps necessary to be in compliance with the provision of the act.

SPECIAL NOTE FOR COMPOSITE OFFSET BLOCKS

Contrary to the Standard Drawings (2012 edition) the Cabinet will allow 6" composite offset blocks in lieu of wooden offset blocks, except as specified on proprietary end treatments and crash cushions. The composite blocks shall be selected from the Cabinet's List of Approved Materials.

REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 176.085(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by KRS 14A.9-010 to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under KRS 14A.9-030 unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. If the foreign entity is not required to obtain a certificate as provided in KRS 14A.9-010, the foreign entity should identify the applicable exception. Foreign entity is defined within KRS 14A.1-070.

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can register with the Secretary of State at https://secure.kentucky.gov/sos/ftbr/welcome.aspx .

SPECIAL NOTE FOR PROJECT QUESTIONS DURING ADVERTISEMENT

Questions about projects during the advertisement should be submitted in writing to the Division of Construction Procurement. This may be done by fax (502) 564-7299 or email to kytc.projectquestions@ky.gov. The Department will attempt to answer all submitted questions. The Department reserves the right not to answer if the question is not pertinent or does not aid in clarifying the project intent.

The deadline for posting answers will be 3:00 pm Eastern Daylight Time, the day preceding the Letting. Questions may be submitted until this deadline with the understanding that the later a question is submitted, the less likely an answer will be able to be provided.

The questions and answers will be posted for each Letting under the heading "Questions & Answers" on the Construction Procurement website (www.transportation.ky.gov/contract). The answers provided shall be considered part of this Special Note and, in case of a discrepancy, will govern over all other bidding documents.

HARDWOOD REMOVAL RESTRICTIONS

The US Department of Agriculture has imposed a quarantine in Kentucky and several surrounding states, to prevent the spread of an invasive insect, the emerald ash borer.

Hardwood cut in conjunction with the project may not be removed from the state. Chipping or burning on site is the preferred method of disposal.

INSTRUCTIONS FOR EXCESS MATERIAL SITES AND BORROW SITES

Identification of excess material sites and borrow sites shall be the responsibility of the Contractor. The Contractor shall be responsible for compliance with all applicable state and federal laws and may wish to consult with the US Fish and Wildlife Service to seek protection under Section 10 of the Endangered Species Act for these activities.

ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public Accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884.

In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004. (See attachment)

10/29/12

Commonwealth of Kentucky
Finance and Administration Cabinet
OFFICE OF THE SECRETARY
Room 383, Capitol Annex
702 Capital Avenue
Frankfort, KY 40601-3462
(502) 564-4240
Fax (502) 564-6785

Steven L. Beshear
Governor

Lori H. Flanery
Secretary

SECRETARY'S ORDER 11-004

FINANCE AND ADMINISTRATION CABINET

Vendor Document Disclosure

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary to conduct a review of the records of a private vendor that holds a contract to provide goods and/or services to the Commonwealth; and

WHEREAS, in order to promote accountability and transparency in governmental operations, the Finance and Administration Cabinet believes that a mechanism should be created which would provide for review and assistance to an Executive Branch agency if said agency cannot obtain access to documents that it deems necessary during the course of an audit, investigation or any other inquiry by an Executive Branch agency that involves the review of documents; and

WHEREAS, KRS 42.014 and KRS 12.270 authorizes the Secretary of the Finance and Administration Cabinet to establish the internal organization and assignment of functions which are not established by statute relating to the Finance and Administration Cabinet; further, KRS Chapter 45A.050 and 45A.230 authorizes the Secretary of the Finance and Administration Cabinet to procure, manage and control all supplies and services that are procured by the Commonwealth and to intervene in controversies among vendors and state agencies; and

NOW, THEREFORE, pursuant to the authority vested in me by KRS 42.014, KRS 12.270, KRS 45A.050, and 45A.230, I, Lori H. Flanery, Secretary of the Finance and Administration Cabinet, do hereby order and direct the following:

I. Upon the request of an Executive Branch agency, the Finance and Administration Cabinet ("FAC") shall formally review any dispute arising where the agency has requested documents from a private vendor that holds a state contract and the vendor has refused access to said documents under a claim that said documents are not directly pertinent or relevant to the agency's inquiry upon which the document request was predicated.

II. Upon the request of an Executive Branch agency, the FAC shall formally review any situation where the agency has requested documents that the agency deems necessary to

conduct audits, investigations or any other formal inquiry where a dispute has arisen as to what documents are necessary to conclude the inquiry.

III. Upon receipt of a request by a state agency pursuant to Sections I & II, the FAC shall consider the request from the Executive Branch agency and the position of the vendor or party opposing the disclosure of the documents, applying any and all relevant law to the facts and circumstances of the matter in controversy. After FAC's review is complete, FAC shall issue a Determination which sets out FAC's position as to what documents and/or records, if any, should be disclosed to the requesting agency. The Determination shall be issued within 30 days of receipt of the request from the agency. This time period may be extended for good cause.

IV. If the Determination concludes that documents are being wrongfully withheld by the private vendor or other party opposing the disclosure from the state agency, the private vendor shall immediately comply with the FAC's Determination. Should the private vendor or other party refuse to comply with FAC's Determination, then the FAC, in concert with the requesting agency, shall effectuate any and all options that it possesses to obtain the documents in question, including, but not limited to, jointly initiating an action in the appropriate court for relief.

V. Any provisions of any prior Order that conflicts with the provisions of this Order shall be deemed null and void.

SPECIAL NOTE FOR RECIPROCAL PREFERENCE

Reciprocal preference to be given by public agencies to resident bidders

By reference, KRS 45A.490 to 45A.494 are incorporated herein and in compliance regarding the bidders residency. Bidders who want to claim resident bidder status should complete the Affidavit for Claiming Resident Bidder Status along with their bid in the Expedite Bidding Program. Submittal of the Affidavit should be done along with the bid in Bid Express.

SURFACING AREAS

The Department estimates the mainline surfacing width to be varied 34-90 feet.

The Department estimates the total mainline area to be surfaced to be 234,364 square yards.

The Department estimates the shoulder width to be varied 0-10 feet on each side.

The Department estimates the total shoulder area to be surfaced to be 16,034 square yards.

ASPHALT MIXTURE

Unless otherwise noted, the Department estimates the rate of application for all asphalt mixtures to be 110 lbs/sy per inch of depth.

INCIDENTAL SURFACING

The Department has included in the quantities of asphalt mixtures established in the proposal estimated quantities required for resurfacing or surfacing mailbox turnouts, farm field entrances, residential and commercial entrances, curve widening, ramp gores and tapers, and road and street approaches, as applicable. Pave these areas to the limits as shown on Standard Drawing RPM-110-06 or as directed by the Engineer. In the event signal detectors are present in the intersecting streets or roads, pave the crossroads to the right of way limit or back of the signal detector, whichever is the farthest back of the mainline. Surface or resurface these areas as directed by the Engineer. The Department will not measure placing and compacting for separate payment but shall be incidental to the Contract unit price for the asphalt mixtures.

FUEL AND ASPHALT PAY ADJUSTMENT

The Department has included the Contract items Asphalt Adjustment and Fuel Adjustment for possible future payments at an established Contract unit price of $1.00. The Department will calculate actual adjustment quantities after work is completed. If existing Contract amount is insufficient to pay all items on the contract with the adjustments, the Department will establish additional monies with a change order.

OPTION A

Be advised that the Department will accept compaction of asphalt mixtures furnished for driving lanes and ramps, at 1 inch (25mm) or greater, on this project according to OPTION A in accordance with Section 402 and Section 403 of the current Standard Specifications. The Department will require joint cores as described in Section 402.03.02 for surface mixtures only. The Department will accept compaction of all other asphalt mixtures according to OPTION B.

SPECIAL NOTE FOR
CONCRETE ENTRANCE RESURFACING

It is anticipated that there will be concrete entrances and medians that will require milling and resurfacing in order to ensure the final pavement surface will match the proposed sidewalk ramp reconstructions and to remove obstructions within crosswalks. The anticipated locations at which concrete milling may occur are listed below; however, the limits and any further locations will be determined by the Engineer at the time of resurfacing. Milling and resurfacing of concrete entrances or medians will be incidental to the bid items for Asphalt Pave Milling and Texturing and Asphalt Surface.

-Concrete median on E Indian Trail at Preston Hwy

-Concrete median on Preston Hwy on north side of Indian Trail intersection

-Concrete entrance on the WB approach at Standiford Lane

-Concrete entrance on the EB approach at Hess Lane

-Concrete entrance on the EB approach at Clarks Lane (Rally's)

SPECIAL NOTE FOR CONCRETE MEDIAN REMOVAL

GENERAL

The existing concrete medians between Audubon Parkway and Clarks Lane are to be removed prior to resurfacing activities a minimum of 1.5 inches below the existing asphalt surface. The Department believes the medians are built upon a flexible asphalt base, however the Contractor must draw their own conclusions as to the underlying pavement. Milling of the medians will be permitted but the tonnage will not be included for payment as Asphalt Pave Milling & Texturing. Upon removal of the concrete median, any drop-offs greater than 1.5 inches shall be wedged. Any need for asphalt wedging shall be incidental to the bid item for median removal.

MEASUREMENT & PAYMENT

Removal of the concrete medians will be measured and included for payment by the square yard under the contract bid item for Remove Concrete Median.

SPECIAL NOTE FOR CATCH BASIN ADJUSTMENT & RECONSTRUCTION

ADJUST CATCH BASIN – This item shall include all work necessary to adjust the existing catch basin inlet to approximate roadway elevation or as directed by the Engineer. Ensure the adjustment does not negatively impact drainage to the inlet. Any damaged frames and/or grates shall be replaced, either with materials supplied by Louisville MSD or paid for by the KYTC. Adjustments are to be performed using brick, mortar and/or concrete having a compressive strength of 3,000 psi prior to being exposed to vehicular traffic.

RECONSTRUCT CATCH BASIN – This item shall include all work necessary to repair all damaged parts of the catch basin and to adjust the inlet to approximate roadway elevation or as directed by the Engineer. The repair work may include but is not limited to the lid, throat, collar/riser and top of the chamber. Ensure the reconstruction does not negatively impact drainage to the inlet. Any damaged frames and/or grates shall be replaced, either with materials supplied by Louisville MSD or paid for by the KYTC. The reconstruction work is to be performed using brick, mortar and/or concrete having a compressive strength of 3,000 psi prior to being exposed to vehicular traffic.

SPECIAL NOTE FOR PAVEMENT MARKING MODIFICATIONS

Included in this Proposal are drawings depicting anticipated pavement marking modifications along the route to be resurfaced. However, per Section 713.03.01 of the Standard Specifications, the Contractor shall still be required to submit a record of existing pavement markings prior to beginning resurfacing activities. The Department requests these records be submitted at least two weeks prior to milling or paving in order to coordinate all desired changes between the District Traffic Engineer and the Contractor. All changes will be returned to the Contractor to ensure the desired modifications can be performed during final surfacing. As the Contractor is responsible for implementing any pavement marking changes, it is highly recommended any questions are addressed to the Project Engineer prior to striping. Any incorrect markings will be removed and replaced with the proper markings at the Contractor’s expense and in a manner approved by the Engineer.

SPECIAL NOTE FOR TRAFFIC SIGNAL TREADLE REMOVAL

Remove the existing traffic signal treadles on the westbound approach to Preston Highway at MM 5.665, adjacent to the AutoZone, as noted below or as directed by the Engineer. Remove the treadle structure (approximately 7.5’ x 2.5’ x 1’) in its entirety, including the metal frame, all internal components and any concrete border. Fill in the resulting void using Class A concrete or greater, to a level matching the surrounding surface. Prior to placing concrete, ensure all loose material is removed from the hole and the sides are nearly vertical. The Contractor can either road plate the concrete until sufficient strength is reached or can utilize a high early concrete mix.

Remove and dispose of all materials off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department (see Special Note for Waste and Borrow). Do not damage existing culvert pipes and any existing underground utilities. Repair or restore any damaged items at no additional cost to the Department.

Perform all treadle removal operations in such a manner that removal and replacement are completed during the same work shift. Do not mill or place new asphalt surface over the concrete until the concrete has reached full strength.

The bidder must draw conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claim for additional compensation if the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit price per EACH for Remove Traffic Signal Treadle as full compensation for all labor, materials, equipment, and incidentals for removing the treadle and disposing of the materials, furnishing and placing concrete, and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer.

SPECIAL NOTE FOR YIELD BAR INSTALLATION

Contrary to the bid item for 36-INCH Yield Bar, the yield bars to be installed on this project shall consist of triangles 16 inches wide at the base and with a height of 24 inches. Spacing between triangles shall be consistent at approximately 6 inches. Exact location and spacing of the Yield Bars will be determined at the time of installation by the Engineer.

SPECIAL NOTE FOR RAILROAD CROSSINGS

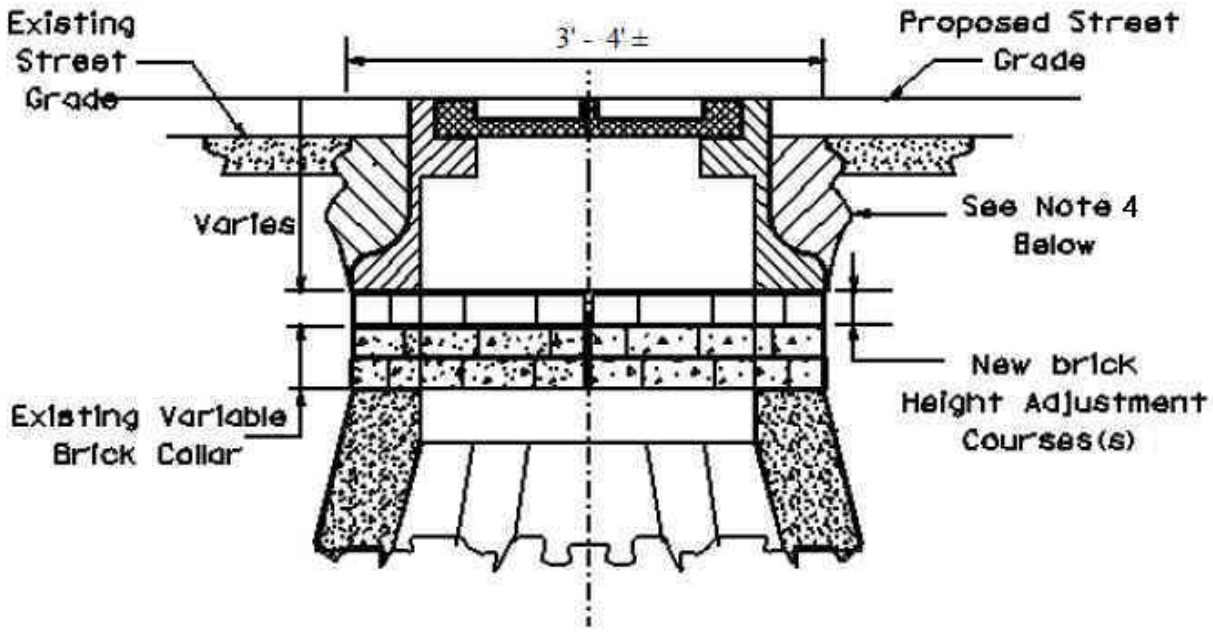
The Contractor shall anticipate performing resurfacing activities adjacent to the railroad crossing at mile point 4.906. In order to resurface up to the tracks, the Contractor shall provide written notification to the Engineer at least 60 days prior to beginning resurfacing activities so the necessary coordination may be made between the Department and the railroad owner.

SPECIAL PROVISION FOR WASTE AND BORROW SITES

Obtain U.S. Army Corps of Engineer's approval before utilizing a waste or borrow site that involves "Waters of the United States". The Corps of Engineers defines "Waters of the United States" as perennial or intermittent streams, ponds or wetlands. The Corps of Engineers also considers ephemeral streams, typically dry except during rainfall but having a defined drainage channel, to be jurisdictional waters. Direct questions concerning any potential impacts to "Waters of the United States" to the attention of the appropriate District Office for the Corps of Engineers for a determination prior to disturbance. Be responsible for any fees associated with obtaining approval for waste and borrow sites from the U.S. Army Corps of Engineer or other appropriate regulatory agencies.

1-296 Waste & Borrow Sites
01/02/2012

SPECIAL NOTE FOR MANHOLE ADJUSTMENT
LOUISVILLE METROPOLITAN SEWER DISTRICT (MSD)

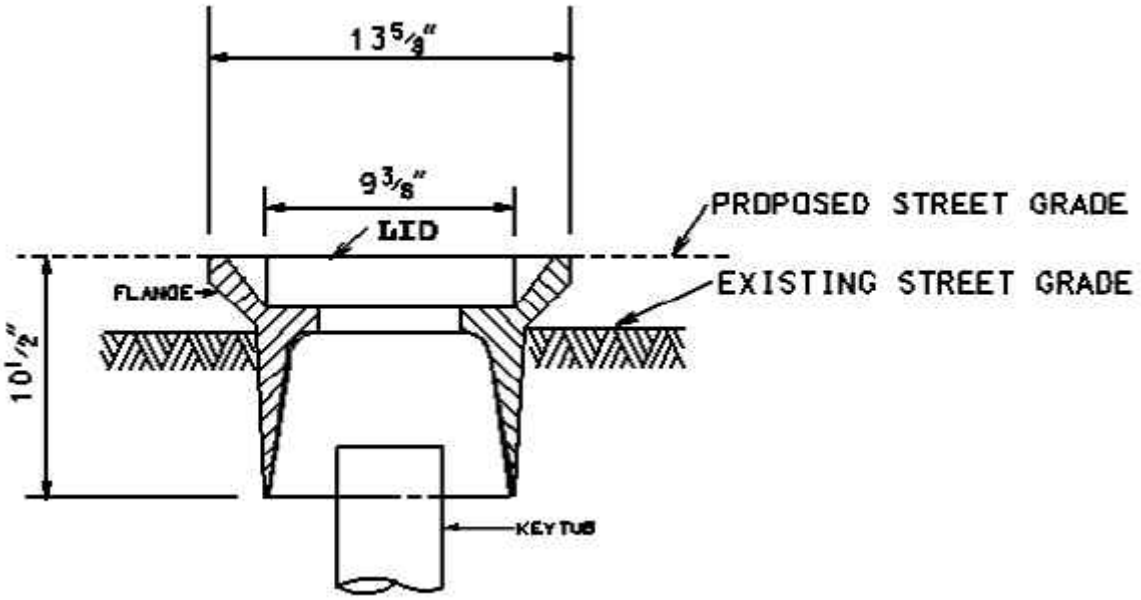


NOT TO SCALE

CONSTRUCTION NOTES:

1. The Engineer will determine whether manhole adjustments are to be be made peior to or after milling and/or resurfacing.
2. Reuse existing frames, grates, and covers. Use other materials conforming to MSD's Technical Specifications. Obtain these specifications from MSD's Engineering Division Office, 400 South Sixth Street, Louisville, KY 40202.
3. Report any missing or damaged frame, grate, or cover discovered by the Contractor to MSD's inspector. Obtain replacement hardware items from MSD's Storage Yard, 151 Cabel Street, Louisville, KY, upon presentation of an MSD inspector's validated Stores Requisition and exchange for the damaged hardware items.
4. Adjust manhole frame and grates with brick and mortar as shown on the drawing or as directed by the Engineer. Do not use wood shims or blocks to adjust or reset the frame height. Fill cross-hatched area with concrete having a minimum 28-day compressive strength of 2000 psi. Use first class workmanship in conformity with MSD's Technical Specifications.
5. Adjust catch basin frames and grates in similar manner as manhole adjustments as approved by the Engineer.
6. Louisville MSD and/or the Engineer may inspect manhole and/or catch basin frame height adjustments. Make corrections as directed by the Engineer at no additional cost to the Department.
7. The Department will measure and pay Adjust Manhole Frame to Grade according to Sections 403.04.02 and 403.05.01 or Sections 408.04.04 and 408.05.02 as applicable.

SPECIAL NOTES FOR WATER VALVE ADJUSTMENT
LOUISVILLE WATER COMPANY (LWC)



1. Unless directed otherwise by the Engineer, adjust all water valve boxes to grade during resurfacing operations. For streets to be milled prior to resurfacing, either mill around the valve box or remove the round top and replace it prior to paving as approved by the Engineer.
2. Immediately prior to paving, work the round top loose by prying with a crowbar or cold chisel under the flange. If necessary, free round tops located in concrete streets with jackhammer. During paving, the contractor has the option to place cold patch under the flange or leave the round top loose. During paving, raise the round top to grade and install with an adequate amount of compacted asphalt placed under the flange to prevent future settlement. Keep the keytube free of millings and/or foreign objects (rocks, asphalt, broken castings).
3. Replace all valve boxes damaged during removal with the standard round top furnished by the Louisville Water Company. A supply of round tops is available at the Louisville Water Company Distribution Center, 4801 Allmond Avenue.
4. LWC estimates that approximately 5% of valve box assemblies may be a different style one piece cast iron round top and keytube. When these are encountered, cut the valve box off five (5) inches below existing grade and replace with the standard valve box available at the Louisville Water Company's yard.
5. The Louisville Water Company and/or the Engineer will inspect all adjusted water valve boxes after paving. Adjust any valve boxes which are paved over or adjusted water valve boxes determined by the Engineer or LWC to be substandard in workmanship by cutting out in a 2 feet square, raised to grade, and repaving with hot mix asphalt. Perform all corrective work at no additional expense to the Department,
6. The Department will measure Adjust Water Valve in individual units, each. Payment at the Contract unit price shall be full compensation for all labor, equipment, materials, and incidentals for adjusting water valve boxes to grade according to these notes and as directed by the Engineer.

COORDINATION OF WORK WITH OTHER CONTRACTS

Be advised, there may be an active project(s) adjacent to or within this project. The Engineer will coordinate the work of the Contractors. See Section 105.06.

1-3193 Coordination Contracts
01/02/2012

SPECIAL NOTE FOR
ASPHALT MILLING AND TEXTURING

Begin paving operations within **72 hours** of commencement of the milling operation. Continue paving operations continuously until all milled areas are resurfaced. If paving operations are not begun within this time period, the Department will assess liquidated damages at the rate prescribed by Section 108.09 until such time as paving operations begin. Liquidated damages may also be assessed for milled surfaces exposed longer than 7 calendar days. Any days affected by inclement weather, that the Department agrees prevents resurfacing activities, will not count toward the 7 day window.

Take possession of the millings and recycle the millings or dispose of the millings off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department.

SPECIAL NOTE FOR BASE FAILURE REPAIR

Repair locations listed on the summary are approximate only. The Engineer will determine actual repair locations and dimensions at the time of construction. Prior to overall milling and/or leveling and wedging, excavate the designated base failure areas to a depth 12 inches below the existing asphalt pavement surface level. Dispose of the excavated materials at waste sites off the Right-of-Way obtained by the Contractor at no additional cost to the Department. See Special Note for Waste and Borrow.

Backfill the excavated areas with Class 3 Asphalt Base 1.00D PG64-22. Compact the asphalt base to the compaction required in Section 403.03.10 in 4 inch maximum courses. Perform all base failure repairs in such a manner that removal and replacement are completed during the same work shift. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over repaired base failure areas until a minimum of 14 calendar days have elapsed after placement of the asphalt base. After a minimum of 14 calendar days and when the Engineer determines the base failure repair areas have sufficiently stabilized, milling and/or resurfacing operations can begin in this area. Prior to milling and/or constructing the new asphalt surface, level and wedge any settlement of the repair areas.

The bidder must draw conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claim for additional compensation if the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit prices per square yard for Base Failure repair as full compensation for all labor, materials, equipment, and incidentals for removing pavement and disposing of the materials, furnishing and placing asphalt base, leveling and wedging, and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer.

SPECIAL NOTE FOR TRAFFIC ISLAND REMOVAL

Remove the existing traffic island at the intersection of Phillips Lane and Preston Highway as directed by the Engineer. Saw cut the existing pavement, asphalt surface, base, DGA and PCC pavement (if present). Excavate to an approximate depth of 12 inches below the bottom of the existing adjacent pavement elevation. Remove and dispose of all materials off the Right-of-Way at sites obtained by the Contractor at no additional cost to the Department (see Special Note for Waste and Borrow). Do not damage existing culvert pipes and any existing underground utilities. Repair or restore any damaged items at no additional cost to the Department.

Backfill the excavated area with Class 3 Asphalt Base 1.00D PG64-22 in 4 inch maximum courses up to the existing pavement surface. Compact the asphalt base to the compaction required in Section 403.03.10. Perform all traffic island removal operations in such a manner that removal and replacement are completed during the same work shift. Do this work as one of the Contractor's first operations in order to allow further compaction by traffic. Do not mill or place new asphalt surface over repaired base failure areas until a minimum of 14 calendar days have elapsed after placement of the asphalt base. After a minimum of 14 calendar days and when the Engineer determines the new asphalt base has sufficiently stabilized, milling and/or resurfacing operations can begin in this area. Prior to milling and/or constructing the new asphalt surface, level and wedge any areas of settlement.

The bidder must draw conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claim for additional compensation if the materials encountered that are not in accord with the classification shown.

Accept payment at the Contract unit price per square yard for Remove Traffic Island as full compensation for all labor, materials, equipment, and incidentals for removing traffic island and disposing of the materials, furnishing and placing asphalt base, leveling and wedging, and all other items necessary to complete the work according to these notes to the satisfaction of the Engineer.

SPECIAL NOTE FOR TYPICAL SECTION DIMENSIONS

Consider the dimensions shown on the typical sections for pavement and shoulder widths and thickness' to be nominal or typical dimensions. The Engineer may direct or approve varying the actual dimensions to be constructed to fit existing conditions. Do not widen existing pavement or shoulders unless specified elsewhere in this proposal or directed by the engineer.

1-3725 Typical Section Dimensions
01/02/2012

SPECIAL NOTE FOR CONSTRUCTION OF SIDEWALK RAMPS

GENERAL

Unless otherwise stated in the contract, or as directed by or with prior approval from the Engineer, construct sidewalk ramps and adjacent roadway features in accordance with Section 505 of the Standard Specifications; Supplemental Specifications, current Standard Drawings RPM-100-09, RPM-150-07, RPM-152-07, RPM-170-08, RPM-172-06, and RGX-040-02, as applicable. Saw cut existing sidewalks, curb and gutter, and pavement, if present, and reconstruct sidewalk ramps with detectable warnings as directed or approved by the Engineer. Unless specified otherwise in the Contract, construct concrete sidewalk with 4” nominal minimum required thickness; however, if the existing sidewalk thickness is found to be greater or less than the thickness specified, transition the thickness as directed by the Engineer.

During the work to bring the existing sidewalk ramps into current ADA standards, the elevation of the new ramp may be above the grade of the existing roadway. Following completion of the new sidewalk ramp, if a grade difference of 1/2" or greater exists between any portion of the new ramp and roadway, and more than 14 days will pass prior to beginning resurfacing, the Contractor will be required to install asphalt wedges to ensure the sidewalk facilities remain accessible until resurfacing activities begin. Failure to maintain access to the new sidewalk ramps could result in Liquidated Damages being applied at a rate of $200/day after 14 days. All liquidated damages will be applied cumulatively.

Except as required by the work or directed by the Engineer, do not disturb drainage pipes, catch basins and other roadway features, appurtenances and installations. Restore and/or re-install any roadway features, appurtenances and installations damaged by the work in like kind materials and design at no additional cost to the Department. Dispose of all waste off the right of way at sites obtained by the Contractor at no additional cost to the Department (see Special Note for Waste and Borrow).

If the sidewalk ramp work is located at a signalized intersection, the sidewalk Contractor is to coordinate with the electrical Contractor and Engineer to ensure the necessary electrical components are located and installed prior to installing the new sidewalk ramp, such as but not limited to conduit and junction boxes. Following construction of new sidewalk, the Department will not be responsible for additional work required to complete the installation of the required electrical components due to improper planning or coordination.

The Contractor shall be responsible to ensure that all sidewalk ramp landings meet flush with the final asphalt surface and maintain positive drainage following the completion of the sidewalk work, regardless of the existing conditions. This work should be coordinated between the Engineer and sidewalk and paving Contractors to ensure the final product does not create standing water or negatively affects the ride quality of the roadway.

Although the bid item for curb & gutter and header curb are considered modified, the installed item shall conform as closely to the standard drawing as field conditions permit or as directed by the Engineer. For example, header curb shall have a thickness of 7 inches and minimum depth of 12 inches below the pavement surface with the top modified to match surrounding conditions. Also, curb and gutter shall have a gutter depth of at least 8 inches with the thickness and curb varying to match existing conditions.

In the event that a location requires sidewalk thicker than 4 inches, the additional thickness, as requested by the Department, will be measured and included for payment as mass concrete. Also, if the curb alignment is modified, creating a void between the new curb/gutter and existing pavement, the area in between will be filled with Class A concrete and shall be included for payment as mass concrete.

When constructing curb draw downs, it is preferred that the curb be drawn down with a maximum slope of 12:1 (8.333%) regardless if the sidewalk is adjacent to the curb or if there is a grass verge. Additionally, the Contractor is to ensure that following restoration of all disturbed areas, the completed earthen slopes adjacent to the sidewalk are no steeper than the existing unless otherwise directed or approved by the Engineer. This may require the need for back curb and/or additional grading/fill work.

MEASUREMENT & PAYMENT

SIDEWALK-4 IN CONCRETE – The Department will measure the new sidewalk and sidewalk ramps in accordance with Section 505.04 of the current Standard Specifications. The Department will not measure Roadway Excavation or Embankment in Place, but shall consider this work to be incidental to the bid item SIDEWALK-4 IN CONCRETE. Accept payment at the Contract unit price per square yard as full compensation for all labor, materials, equipment, and incidentals required for removal and disposal of existing sidewalk, excavation and embankment, construction of the sidewalk and ramps, and restoration of disturbed features in accordance with these notes or as directed by the Engineer. The bid item for SIDEWALK-4 IN CONCRETE will not include any curb and/or gutter work along the edge of pavement, even if the curb and/or gutter is poured monolithic with sidewalk. However, any curb not continually adjacent to the edge of pavement will be included in the measured square area of sidewalk and no additional compensation will be made regardless of depth or height (ie. back curb, curb returns, etc.). In the event that a small utility or curb box hood requires adjusting as part of this work, no additional compensation shall be made and will be considered incidental to the bid item for SIDEWALK-4 IN CONCRETE.

DETECTABLE WARNINGS – The Department will measure and make payment for Detectable Warnings in accordance with Section 505 of the current Standard Specifications and current Standard Drawing RGX-040-02.

STANDARD CURB AND GUTTER MOD – The Department will measure and make payment for curb and gutter in accordance with Section 506 of the current Standard Specifications. Curb and gutter will be measured for the full length installed, including the area between the sidewalk ramp and roadway pavement. Accept payment at the Contract unit price per linear foot as full compensation for all labor, materials, equipment and incidentals required for removal and disposal of the existing curb and gutter, grade adjustments, transitions, restoration of adjacent pavement and disturbed areas, and all other work necessary to install the new curb and gutter to meet current ADA standards, Standard Drawing RPM-100-09 and the satisfaction of the Engineer. In the event that a small utility or curb box hood requires adjusting as part of this work, no additional compensation shall be made and will be considered incidental to the bid item for STANDARD CURB AND GUTTER MOD.

STANDARD HEADER CURB MOD – The Department will measure and make payment for header curb in accordance with Section 506 of the current Standard Specifications. Header curb will be measured for the full length installed, including the area between the sidewalk ramp and roadway pavement. Accept

payment at the Contract unit price per linear foot as full compensation for all labor, materials, equipment and incidentals required for removal and disposal of the existing curb, grade adjustments, transitions, restoration of adjacent pavement and disturbed areas, and all other work necessary to install the new header curb to meet current ADA standards, Standard Drawing RPM-100-09 and the satisfaction of the Engineer. In the event that a small utility or curb box hood requires adjusting as part of this work, no additional compensation shall be made and will be considered incidental to the bid item for STANDARD HEADER CURB MOD.

MASS CONCRETE – The Department will measure and make payment for mass concrete in accordance with Section 601.04 of the current Standard Specifications. The change order bid item for Mass Concrete shall include all work necessary to excavate, grade, form and pour the extra thick sidewalk or fill the void between new curb/gutter and existing pavement.

TRAFFIC CONTROL PLAN

TRAFFIC CONTROL GENERAL

Except as provided herein, maintain and control traffic in accordance with the Standard and Supplemental Specifications and the Standard and Sepia Drawings, current editions. Except for the roadway and traffic control bid items listed, all items of work necessary to maintain and control traffic will be paid at the lump sum bid price to "Maintain and Control Traffic".

Contrary to Section 106.01, furnish new, or used in like new condition, traffic control devices at the beginning of the work and maintain in like new condition until completion of the work.

PROJECT PHASING & CONSTRUCTION PROCEDURES

LANE CLOSURES ARE PERMITTED DURING THE FOLLOWING HOURS:

KY 61 BETWEEN MM 4.832 (SOUTH END OF PROJECT) AND MM 10.178 (FETTER AVE)
-Monday through Friday 9:00 A.M. – 3:00 P.M.
-Sunday through Thursday nights 7:00 P.M. – 5:00 A.M.
-Friday and Saturday nights 7:00 P.M. – 8:00 A.M.

KY 61 BETWEEN MM 10.178 (FETTER AVE) AND MM 10.963 (NORTH END OF PROJECT)
-Monday through Friday 9:00 A.M. – 3:00 P.M.
-Monday through Friday 6:30 P.M. – 11:30 P.M.
-Saturday and Sunday 8:00 A.M. – 11:30 P.M.

KY 61 AT I-65 NORTH RAMPS
-Lane closures will be permitted from 8:00 P.M. Friday night through 5:00 A.M. the following Monday morning to complete the concrete pavement repairs.

KY 61 AT GRADE LANE
-Lane closures will be permitted from 8:00 P.M. Friday night through 5:00 A.M. the following Monday morning to complete the concrete pavement repairs. The left most right turn lane from Grade Lane to Southbound Preston Hwy will be permitted to stay closed until 5:00 A.M. Wednesday morning.

LANE CLOSURES WILL NOT BE PERMITTED ON THE FOLLOWING DAYS:

Friday April 3 – Sunday April 5, 2015	Easter Weekend
Saturday April 18, 2015	Thunder Over Louisville
Friday May 1 – Sunday May 3, 2015	Kentucky Derby Weekend
Friday May 23 – Monday May 25, 2015	Memorial Day Weekend
Friday July 3 – Sunday July 7 , 2015	Independence Day Weekend
Friday September 4 – Monday September 7, 2015	Labor Day Weekend
Friday October 2 – Sunday October 4, 2015	St. James Court Art Show

The Engineer may specify additional days and hours when lane closures will not be allowed.

At locations with three or more lanes, maintain one lane of traffic in each direction at all times during construction. At locations with two lanes, maintain alternating one way traffic during construction. Provide a minimum clear lane width of 11 feet; however, provide for passage of vehicles of up to 16 feet in width. If traffic should be stopped due to construction operations, and a school bus on an official run arrives on the scene, make provisions for the passage of the bus as quickly as possible.

LANE CLOSURE LIQUIDATED DAMAGES

Do not leave lane closures in place during non-working hours.

In the event that lane closures are in place outside of the days and/or times listed above, Liquidated Damages shall be applied as follows:

- $ 5,000 for the first hour or fraction thereof
- $ 10,000 for any additional hour or fraction thereof

A lane closure shall be defined as any traffic control device or Contract worker or vehicle in the traveled way that could potentially impact the flow of traffic. This includes but not limited to signs, barricades, barrels, cones, arrow boards, flaggers, Contractor work vehicles and striping operations.

All liquidated damages will be applied cumulatively.

SIGNS

Contrary to section 112.04.02, only long term signs (signs intended to be continuously in place for more than 3 days) will be measured for payment; short term signs (signs intended to be left in place for 3 days or less) will not be measured for payment but will be incidental to Maintain and Control Traffic.

CHANGEABLE MESSAGE SIGNS

Provide changeable message signs in advance of and within the project at locations determined by the Engineer. If work is in progress concurrently in both directions or if more than one lane closure is in place in the same direction of travel, provide additional changeable message signs as directed by the Engineer. Place changeable message signs one mile in advance of the anticipated queue at each lane closure. As the actual queue lengthens and/or shortens, relocate or provide additional changeable message signs so that traffic has warning of slowed or stopped traffic at least one mile but not more than two miles before reaching the end of the actual queue. The Engineer may vary the designated locations as the work progresses. The Engineer will determine the messages to be displayed. In the event of damage or mechanical/electrical failure, repair or replace the Changeable Message Sign within 24 hours. The Department will measure for payment the maximum number of Changeable Message Signs in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Changeable Message Signs only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Changeable Message Signs or for signs the Engineer directs be replaced due to poor condition or readability. Retain possession of the Changeable Message Signs upon completion of the work.

ARROW PANELS

Use arrow panels as shown on the Standard Drawings or as directed by the Engineer. The Department will measure for payment the maximum number of arrow panels in concurrent use at the same time on a single day on all sections of the contract. The Department will measure for payment the maximum number of Changeable Message Signs in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual Arrow Panels only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged Arrow Panels or for panels signs the Engineer directs be replaced due to poor condition or readability for payment. Retain possession of the Arrow Panels upon completion of the work.

TEMPORARY ENTRANCES

The Engineer will not require the Contractor to provide continuous access to farms, single family, duplex, or triplex residential properties during working hours; however, provide reasonable egress and ingress to each such property when actual operations are not in progress at that location. Limit the time during which a farm or residential entrance is blocked to the minimum length of time required for actual operations, not extended for the Contractor's convenience, and in no case exceeding six (6) hours. Notify all residents twenty-four hours in advance of any driveway or entrance closings and make any accommodations necessary to meet the access needs of disabled residents.

Except as allowed by the Phasing as specified above, maintain direct access to all side streets and roads, schools, churches, commercial properties and apartments or apartment complexes of four or more units at all times.

The Department will measure asphalt materials required to construct and maintain any temporary entrances which may be necessary to provide temporary access; however, the Department will not measure aggregates, excavation, and/or embankment, but shall be incidental to Maintain and Control Traffic. The Engineer will determine the type of surfacing material, asphalt or aggregate, to be used at each entrance.

TRAFFIC SIGNAL LOOPS

Install traffic signal loops according to the Special Notes for Traffic Signal Loop Replacement. Coordinate the placement of the loops with the Engineer.

TRAFFIC COUNTING INDUCTANCE LOOPS AND AXLE SENSORS

Install traffic counting loops and axle sensors according to the Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors. Coordinate the placement of the loops and sensors with the Engineer.

THERMOPLASTIC INTERSECTION MARKINGS

Consider the locations listed on the summary as approximate only. Prior to milling and/or resurfacing, locate and document the locations of the existing markings. After resurfacing, replace the markings at their approximate existing locations or as directed by Engineer. Place markings not existing prior to resurfacing as directed by the Engineer and as required by the current MUTCD and standards.

BARRICADES

The Department will not measure barricades used in lieu of barrels and cones for channelization or delineation, but shall be incidental to Maintain and Control Traffic according to Section 112.04.01.

The Department will measure barricades used to protect pavement removal areas in individual units Each. The Department will measure for payment the maximum number of barricades in concurrent use at the same time on a single day on all sections of the contract. The Department will measure individual barricades only once for payment, regardless of how many times they are set, reset, removed, and relocated during the duration of the project. The Department will not measure replacements for damaged barricades the Engineer directs to be replaced due to poor condition or reflectivity. Retain possession of the Barricades upon completion of the work.

PAVEMENT MARKINGS

If there is to be a deviation from the existing striping plan, the Engineer will furnish the Contractor a striping plan prior to placement of the final surface course. Install Temporary Striping according to Section 112 with the following exceptions:

1. Include edge lines in Temporary Striping; and
2. Place Temporary or Permanent Striping before opening a lane to traffic; and
3. If the Contractor's operations or phasing requires temporary markings that must subsequently be removed from the final surface course, use an approved removable lane tape; however, the Department will not measure removable lane tape for separate payment, but will measure and pay for removable lane tape as temporary striping.

PAVEMENT EDGE DROP-OFFS

Do not allow a pavement edge between opposing directions of traffic or lanes that traffic is expected to cross in a lane change situation with an elevation difference greater than 1½". Place Warning signs (MUTCD W8-11 or W8-9A) in advance of and at 1500' intervals throughout the drop-off area. Dual post the signs on both sides of the traveled way. Wedge all transverse transitions between resurfaced and unresurfaced areas which traffic may cross with asphalt mixture for leveling and wedging. Remove the wedges prior to placement of the final surface course.

Protect pavement edges that traffic is not expected to cross, except accidentally, as follows:

Less than 2" - No protection required.

2" to 4" - Place plastic drums, vertical panels, or barricades every 50 feet. During daylight working hours only, the Engineer will allow the Contractor to use cones in

lieu of plastic drums, panels, and barricades. Wedge the drop-off with DGA or asphalt mixture for leveling and wedging with a 1:1 or flatter slope in daylight hours, or 3:1 or flatter slope during nighttime hours, when work is not active in the drop-off area.

Greater than 4” - Protect drop-offs greater than 4 inches within 10 feet of traffic by placing drums, vertical panels, or barricades every 25 feet. The Engineer will not allow the use of cones in lieu of drums, vertical panels, or barricades for drop-offs greater than 4”. Place Type III Barricades directly in front of the drop-off facing on coming traffic in both directions of travel. Provide warning signs as shown on the Standard Drawings or as directed by the Engineer

Pedestrians & Bicycles - Protect pedestrian and bicycle traffic as directed by the engineer.

USE AND PLACEMENT OF CHANGEABLE MESSAGE SIGNS

The following policy is based upon current Changeable Message Signs (CMS) standards and practice from many sources, including the Federal Highway Administration (FHWA), other State Departments of Transportation, and Traffic Safety Associations. It is understood that each CMS installation or use requires individual consideration due to the specific location or purpose. However, there will be elements that are constant in nearly all applications. Accordingly these recommended guidelines bring a level of uniformity, while still being open to regional experience and engineering judgment.

Application

The primary purpose of CMS is to advise the driver of unexpected traffic and routing situations. Examples of applications where CMS can be effective include:

- Closures (road, lane, bridge, ramp, shoulder, interstate)
- Changes in alignment or surface conditions
- Significant delays, congestion
- Construction/maintenance activities (delays, future activities)
- Detours/alternative routes
- Special events with traffic and safety implications
- Crash/incidents
- Vehicle restrictions (width, height, weight, flammable)
- Advance notice of new traffic control devices
- Real-time traffic conditions (must be kept up to date)
- Weather /driving conditions, environmental conditions, Roadway Weather Information Systems
- Emergency Situations
- Referral to Highway Advisory Radio (if available)
- Messages as approved by the County Engineer's Office

CMS should not be used for:

- Replacement of static signs (e.g. road work ahead), regulatory signage (e.g. speed limits), pavement markings, standard traffic control devices, conventional warning or guide signs.
- Replacement of lighted arrow board
- Advertising (Don't advertise the event unless clarifying "action" to be taken by driver – e.g. Speedway traffic next exit)
- Generic messages
- Test messages (portable signs only)
- Describe recurrent congestion (e.g. rush hour)
- Public service announcements (not traffic related

Messages

Basic principles that are important to providing proper messages and insuring the proper operation of a CMS are:

- Visible for at least ½ mile under ideal daytime and nighttime conditions
- Legible from all lanes a minimum of 650 feet
- Entire message readable twice while traveling at the posted speed
- Nor more than two message panels should be used (three panels may be used on roadways where vehicles are traveling less than 45 mph). A panel is the message that fits on the face of the sign without flipping or scrolling.
- Each panel should convey a single thought; short and concise
- Do not use two unrelated panels on a sign
- Do not use the sign for two unrelated messages
- Should not scroll text horizontally or vertically
- Should not contain both the words left and right
- Use standardized abbreviations and messages
- Should be accurate and timely
- Avoid filler/unnecessary words and periods (hazardous, a, an, the)
- Avoid use of speed limits
- Use words (not numbers) for dates

Placement

Placement of the CMS is important to insure that the signs is visible to the driver and provides ample time to take any necessary action. Some of the following principles may only be applicable to controlled access roadways. The basic principles of placement for a CMS are:

- When 2 signs are needed, place on same side of roadway and at least 1,000 feet apart
- Place behind semi-rigid/rigid protection (guardrail, barrier) or outside of the clear zone
- Place 1,000 feet in advance of work zone; at least one mile ahead of decision point
- Normally place on right side of roadway; but should be placed closest to the affected lane so that either side is acceptable
- Signs should not be dual mounted (one on each side of roadway facing same direction)
- Point trailer hitch downstream
- Secure to immovable object to prevent thief (if necessary)
- Do not place in sags or just beyond crest
- Check for reflection of sun to prevent the blinding of motorist
- Should be turned ~3 degrees outward from perpendicular to the edge of pavement
- Bottom of sign should be 7 feet above the elevation of edge of roadway
- Should be removed when not in use
-

Standard Abbreviations

The following is a list of standard abbreviations to be used on CMS.

Word	Abbrev.	Example
Access	ACCS	ACCIDENT AHEAD/USE ACCS RD NEXT RIGHT
Alternate	ALT	ACCIDENT AHEAD/USE ALT RTE NEXT RIGHT
Avenue	AVE	FIFTH AVE CLOSED/DETOUR NEXT LEFT
Blocked	BLKD	FIFTH AVE BLKD/MERGE LEFT
Boulevard	BLVD	MAIN BLVD CLOSED/USE ALT RTE
Bridge	BRDG	SMITH BRDG CLOSED/USE ALT RTE
Cardinal Directions	N, S, E, W	N I75 CLOSED/ DETOUR EXIT 30
Center	CNTR	CNTR LANE CLOSED/MERGE LEFT
Commercial	COMM	OVRSZ COMM VEH/USE I275
Condition	COND	ICY COND POSSIBLE
Congested	CONG	HVY CONG NEXT 3 MI
Construction	CONST	CONST WORK AHEAD/EXPECT DELAYS
Downtown	DWNTN	DWNTN TRAF USE EX 40
Eastbound	E-BND	E-BND I64 CLOSED/DETOUR EXIT 20
Emergency	EMER	EMER VEH AHEAD/PREPARE TO STOP
Entrance, Enter	EX, EXT	DWNTN TRAF USE EX 40
Expressway	EXPWY	WTRSN EXPWY CLOSED/DETOUR EXIT 10
Freeway	FRWY, FWY	GN SYNDR FWY CLOSED/DETOUR EXIT 15
Hazardous Materials	HAZMAT	HAZMAT IN ROADWAY/ALL TRAF EXIT 25
Highway	HWY	ACCIDENT ON AA HWY/EXPECT DELAYS
Hour	HR	ACCIDENT ON AA HWY/2 HR DELAY
Information	INFO	TRAF INFO TUNE TO 1240 AM
Interstate	I	E-BND I64 CLOSED/DETOUR EXIT 20
Lane	LN	LN CLOSED/MERGE LEFT
Left	LFT	LANE CLOSED/MERGE LFT
Local	LOC	LOC TRAF USE ALT RTE
Maintenance	MAINT	MAINT WRK ON BRDG/SLOW
Major	MAJ	MAJ DELWAYS I75/USE ALT RTE

Mile	MI	ACCIDENT 3 MI AHEAD/ USE ALT RTE
Minor	MNR	ACCIDENT 3 MI MNR DELAY
Minutes	MIN	ACCIDENT 3 MI/30 MIN DELAY
Northbound	N-BND	N-BND I75 CLOSED/ DETOUR EXIT 50
Oversized	OVRSZ	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Parking	PKING	EVENT PKING NEXT RGT
Parkway	PKWY	CUM PKWAY TRAF/DETOUR EXIT 60
Prepare	PREP	ACCIDENT 3 MIL/PREP TO STOP
Right	RGT	EVENT PKING NEXT RGT
Road	RD	HAZMAT IN RD/ALL TRAF EXIT 25
Roadwork	RDWK	RDWK NEXT 4 MI/POSSIBLE DELAYS
Route	RTE	MAJ DELAYS I75/USE ALT RTE
Shoulder	SHLDR	SHLDR CLOSED NEXT 5 MI
Slippery	SLIP	SLIP COND POSSIBLE/ SLOW SPD
Southbound	S-BND	S-BND I75 CLOSED/DETOUR EXIT 50
Speed	SPD	SLIP COND POSSIBLE/ SLOW SPD
Street	ST	MAIN ST CLOSED/USE ALT RTE
Traffic	TRAF	CUM PKWAY TRAF/DETOUR EXIT 60
Vehicle	VEH	OVRSZ COMM VEH/USE I275 NEXT RIGHT
Westbound	W-BND	W-BND I64 CLOSED/DETOUR EXIT 50
Work	WRK	CONST WRK 2MI/POSSIBLE DELAYS

Certain abbreviations are prone to inviting confusion because another word is abbreviated or could be abbreviated in the same way. DO NO USE THESE ABBREVIATIONS.

Abbrev.	**Intended Word**	**Word Erroneously Given**
ACC	Accident	Access (Road)
CLRS	Clears	Colors
DLY	Delay	Daily
FDR	Feeder	Federal
L	Left	Lane (merge)
LOC	Local	Location
LT	Light (traffic)	Left
PARK	Parking	Park
POLL	Pollution (index)	Poll
RED	Reduce	Red
STAD	Stadium	Standard

TEMP	Temporary	Temperature
WRNG	Warning	Wrong

TYPICAL MESSAGES

The following is a list of typical messages used on CMS. The list consists of the reason or problem that you want the driver to be aware of and the action that you want the driver to take.

Reason/Problem	Action
ACCIDENT	ALL TRAFFIC EXIT RT
ACCIDENT/XX MILES	AVOID DELAY USE XX
XX ROAD CLOSED	CONSIDER ALT ROUTE
XX EXIT CLOSED	DETOUR
BRIDGE CLOSED	DETOUR XX MILES
BRIDGE/(SLIPPERY, ICE, ETC.)	DO NOT PASS
CENTER/LANE/CLOSED	EXPECT DELAYS
DELAY(S), MAJOR/DELAYS	FOLLOW ALT ROUTE
DEBRIS AHEAD	KEEP LEFT
DENSE FOG	KEEP RIGHT
DISABLED/VEHICLE	MERGE XX MILES
EMER/VEHICLES/ONLY	MERGE LEFT
EVENT PARKING	MERGE RIGHT
EXIT XX CLOSED	ONE-WAY TRAFFIC
FLAGGER XX MILES	PASS TO LEFT
FOG XX MILES	PASS TO RIGHT
FREEWAY CLOSED	PREPARE TO STOP
FRESH OIL	REDUCE SPEED
HAZMAT SPILL	SLOW
ICE	SLOW DOWN
INCIDENT AHEAD	STAY IN LANE
LANES (NARROW, SHIFT, MERGE, ETC.)	STOP AHEAD
LEFT LANE CLOSED	STOP XX MILES
LEFT LANE NARROWS	TUNE RADIO 1610 AM
LEFT 2 LANES CLOSED	USE NN ROAD
LEFT SHOULDER CLOSED	USE CENTER LANE
LOOSE GRAVEL	USE DETOUR ROUTE
MEDIAN WORK XX MILES	USE LEFT TURN LANE
MOVING WORK ZONE, WORKERS IN ROADWAY	USE NEXT EXIT
NEXT EXIT CLOSED	USE RIGHT LANE
NO OVERSIZED LOADS	WATCH FOR FLAGGER
NO PASSING	
NO SHOULDER	
ONE LANE BRIDGE	

PEOPLE CROSSING
RAMP CLOSED
RAMP (SLIPPERY, ICE, ETC.)
RIGHT LANE CLOSED
RIGHT LANE NARROWS
RIGHT SHOULDER CLOSED
ROAD CLOSED
ROAD CLOSED XX MILES
ROAD (SLIPPERY, ICE, ETC.)
ROAD WORK
ROAD WORK (OR CONSTRUCTION) (TONIGHT, TODAY, TOMORROW, DATE)
ROAD WORK XX MILES
SHOULDER (SLIPPERY, ICE, SOFT, BLOCKED, ETC.)
NEW SIGNAL XX MILES
SLOW 1 (OR 2) - WAY TRAFFIC
SOFT SHOULDER
STALLED VEHICLES AHEAD
TRAFFIC BACKUP
TRAFFIC SLOWS
TRUCK CROSSING
TRUCKS ENTERING
TOW TRUCK AHEAD
UNEVEN LANES
WATER ON ROAD
WET PAINT
WORK ZONE XX MILES
WORKERS AHEAD

PERMANENT TRAFFIC DATA ACQUISITION STATIONS
ESTIMATE OF QUANTITIES

Bid Item Code	Description	Unit	Quantity
2562	SIGNS	SQ FT	
2650	MAINTAIN AND CONTROL TRAFFIC	LP SUM	
2775	FLASHING ARROW	EACH	
4791	CONDUIT ¾ INCH	LIN FT	
4793	CONDUIT 1 ¼ INCH	LIN FT	60
4795	CONDUIT 2 INCH	LIN FT	30
4810	JUNCTION BOX	EACH	
4811	JUNCTION BOX TYPE B	EACH	
4820	TRENCHING AND BACKFILLING	LIN FT	75
4821	OPEN CUT ROADWAY	LIN FT	
4829	PIEZOELECTRIC SENSOR	EACH	12
4830	LOOP WIRE	LIN FT	4500
4850	CABLE NO. 14/1 PAIR	LIN FT	
4871	POLE – 35’ WOODEN	EACH	
4895	LOOP SAW SLOT AND FILL	LIN FT	1050
4899	ELECTRICAL SERVICE	EACH	
20213EC	INSTALL PAD MOUNT ENCLOSURE	EACH	
20359EC	GALV STEEL CABINET	EACH	3
20360ES818	WOOD POST	EACH	6
20391ES835	JUNCTION BOX TYPE A	EACH	3
20392ES835	JUNCTION BOX TYPE C	EACH	
20468EC	JUNCTION BOX 10x8x4	EACH	
21543EN	BORE AND JACK PIPE – 2 IN	LIN FT	
23206EC	INSTALL CONTROLLER CABINET	EACH	

MATERIAL, INSTALLATION, AND BID ITEM NOTES FOR PERMANENT TRAFFIC DATA ACQUISITION STATIONS

1. DESCRIPTION

Except as specified in these notes, all work shall consist of furnishing and installing all materials necessary for permanent data acquisition station equipment installation(s) and shall be performed in accordance with the current editions of:

- The Contract
- Division of Planning Standard Detail Sheets
- Kentucky Transportation Cabinet, Department of Highways, *Standard Specifications for Road and Bridge Construction*
- Kentucky Transportation Cabinet, Department of Highways, Standard Drawings
- National Fire Protection Association *(NFPA) 70: National Electrical Code*
- Institute of Electrical and Electronic Engineers (IEEE), *National Electrical Safety Code*
- Federal Highway Administration, *Manual on Uniform Traffic Control Devices*
- American Association of State Highway and Transportation Officials (AASHTO), *Roadside Design Guide*.
- Standards of the utility company serving the installation, if applicable

The permanent traffic data acquisition station layout(s) indicate the extent and general arrangement of the proposed installation and are for general guidance. Any omission or commission shown or implied shall not be cause for deviation from the intent of the plans and specifications. Information shown on the plans and in this proposal and the types and quantities of work listed are not to be taken as an accurate or complete evaluation of the material and conditions to be encountered during construction. The bidder must draw his own conclusion as to the conditions encountered. The Department of Highways (Department) does not give any guarantee as to the accuracy of the data and no claim will be considered for additional compensation if the conditions encountered are not in accordance with the information shown. If any modifications of the plans or specifications are considered necessary by the Contractor, details of such modifications and the reasons, therefore, shall be submitted in writing to the Engineer for written approval prior to beginning such modified work.

The Contractor shall contact all utility companies and the district utility agent prior to beginning construction to insure proper clearance and shielding from existing and proposed utilities. The Contractor shall use all possible care in excavating on this project so as not to disturb any existing utilities whether shown on the plans or not shown on the plans. Any utilities disturbed or damaged by the Contractor during construction shall be replaced or repaired to original condition by the Contractor at no cost to the department. If necessary, to avoid existing utilities, the Contractor shall hand dig areas where poles or conduit cross utilities.

The Contractor shall be responsible for all damage to public and/or private property resulting from his work.

The Contractor shall inspect the project site prior to submitting a bid and shall be thoroughly familiarized with existing conditions. Submission of a bid will be considered an affirmation of this inspection having been completed. The Department will not honor any claims resulting from site conditions.

2. MATERIALS

All proposed materials shall be approved prior to being utilized. The Contractor shall submit for material approval an electronic file of descriptive literature, drawings and any requested design data for the proposed materials. After approval, no substitutions of any approved materials may be made without the written approval of the Engineer.

Materials requiring sampling shall be made available a sufficient time in advance of their use to allow for necessary testing.

2.1. Anchoring

2.1.1. Anchor and Anchor Rod

Anchor, except rock anchor, shall be expanding type, with a minimum area of 135 square inches.

Anchor rod shall be galvanized steel, double-eye, have a minimum diameter of 5/8 inches, and a minimum length of 84 inches. Minimum holding capacity shall be 15,400 lbs.

Rock anchor shall be galvanized steel, triple-eye, expanding type, with a minimum diameter of ¾ inch, a minimum 53 inches long, and a minimum tensile strength of 23,000 lb.

2.1.2. Guy Wire and Guy Guard

Guy wire shall be Class A, Zinc-coated, 3/8 inch diameter, high strength grade steel (minimum 10,800 lb.) and galvanized per ASTM A475. Guy guard shall be 8’ long, fully-rounded, yellow, and able to be securely attached to the guy wire.

2.1.3. Strandvise for Guy Wire

Strandvise for guy wire shall be 3/8 inch and rated to hold a minimum of 90% of the rated breaking strength (RBS) of the strand used.

2.2. Asphalt

Asphalt shall be a minimum CL2 Asph Surf 0.38C PG64-22 and conform to the *Standard Specifications for Road and Bridge Construction.*

2.3. Backer Rod

Backer rod shall be ½ inch diameter, closed cell polyethylene foam and shall meet or exceed the following physical properties:

- Density (average): 2.0 lbs/cu.ft. (minimum): ASTM D 1622 test method
- Tensile Strength: 50 PSI (minimum): ASTM D 1623 test method
- Compression Recovery: 90% (minimum): ASTM D 5249 test method
- Water Absorption: 0.03 gm/cc (maximum): ASTM C 1016 test method

2.4. Cabinets

2.4.1. Galvanized Steel Cabinet

Galvanized Steel Cabinet shall be constructed of 16 or 14 gauge galvanized steel and shall meet or exceed the industry standards set forth by UL 50 and NEMA 3R. The finish shall be an ANSI 61 gray polyester powder finish inside and out over the galvanized steel. Cabinet shall have minimum inside dimensions of 20 inches high by 20 inches wide by 8 inches deep.

The cabinet shall be equipped with the following:

- Drip shield top
- Seam-free sides, front, and back, to provide protection in outdoor installations against rain, sleet, and snow
- Hinged cover with 16 gauge galvanized steel continuous stainless steel pin.
- Cover fastened with captive plated steel screws, knob or latch
- Hasp and staple for padlocking
- No gaskets or knockouts
- Back panel for terminal block installation
- Post mounting hardware
- Terminal Blocks

2.4.2. Anchor Bolt for Pad Mounted Cabinet

Anchor bolt for pad mounted cabinet shall be galvanized steel with minimum dimensions of 3/8 inch by 6 inches.

2.5. Concrete

Concrete shall be Class A and conform to the *Standard Specifications for Road and Bridge Construction.*

2.6. Conduit and Conduit Fittings

Conduit and conduit fittings shall be rigid steel unless otherwise specified.

Conduit shall be zinc galvanized inside and out and conform to the NEC, UL Standard 6, and ANSI C-80.1.

Rigid Steel Conduit Fittings shall be galvanized inside and out and conform to the NEC, UL Standard 514B, and ANSI C-80.4. Intermediate Metal Conduit (IMC) will not be approved as an acceptable alternative to rigid steel conduit.

2.7. Conduit sealant

Conduit sealant shall be weather-, mold-, and mildew-resistant and chemically resistant to gasoline, oil, dilute acids and bases. Conduit sealant shall be closed cell type and shall meet or exceed the following properties:

- Cure Time — 20 minutes max.
- Density — 64.4 kg/m3; 6 lbs/ft3
- Compressive Strength (ASTM 1691) — 13.8 MPa; 330 or 300 psi

- Tensile Strength (ASTM 1623) 15.9 MPa; 270 or 250 psi
- Flexural Strength (ASTM D790) 14.5 MPa; 460 or 450 psi
- Service Temperature -20 to 200 F

2.8. Electrical Service Meter Base

Electrical service meter base shall meet or exceed all requirements of the National Electrical Code and the local utility providing the electrical service.

2.9. Electrical Service Disconnect

Electrical service disconnect shall meet or exceed all requirements of the National Electrical Code and the local utility providing the electrical service.

2.10. Flashing Arrow

Flashing Arrow shall conform to the *Standard Specifications for Road and Bridge Construction.*

2.11. Ground Fault Circuit Interrupter (GFCI) Receptacle

Ground Fault Circuit Interrupter Receptacle shall be 2-pole, 3-wire, 20 Amp, 125 Volt, 60 Hz, NEMA 5-20R configuration and meet or exceed the following standards and certifications:

- NEMA WD-1 and WD-6
- UL 498 and 943
- NOM 057
- ANSI C-73

This item shall include a UL listed, 4 inch x4 inch x $2^{1}/_{8}$ inch box with ¾ inch side and end knockouts and a 1½ inches deep, single-receptacle cover to house the GFCI receptacle. Box and cover shall be hot rolled, galvanized steel with a minimum thickness of 0.62 inches.

2.12. Grounding

2.12.1. Ground Rod

Ground Rod shall be composite shaft consisting of a pure copper exterior (5 mil minimum) that has been inseparably molten welded to a steel core. Ground Rod shall have a minimum diameter of 5/8 inch, a minimum length of 8 feet and shall be manufactured for the sole purpose of providing electrical grounding.

2.12.2. Ground Rod Clamp

Ground rod shall be equipped with a one piece cast copper or bronze body with a non-ferrous hexagonal head set screw and designed to accommodate a 10 AWG solid through 2 AWG stranded grounding conductor.

2.13. Grout

2.13.1. Grout for Inductive Loop Installation

Grout for inductive loop installation shall be non-shrink, shall meet the requirements of the *Standard Specifications for Road and Bridge Construction,*

and shall be included on the KYTC Division of Materials, *List of Approved Materials*.

2.13.2. Grout for Piezoelectric Sensor Installation

Grout for piezoelectric sensor installation shall be per the piezoelectric sensor manufacturer's recommendation. Grout shall be suitable for installation in both asphalt and Portland cement pavements. Grout shall have a short curing time (tack free in ten minutes; open to traffic in forty minutes; and fully cured within sixty minutes) to prevent unnecessary lane closure time and should be of sufficient consistency to prevent running when applied on road surfaces with a drainage cross slope. Particulate matter within the grout shall not separate or settle and the grout shall not shrink during the curing process.

2.14. Hardware

Except where specified otherwise, all hardware such as nuts, bolts, washers, threaded ends of fastening devices, etc. with a diameter less than 5/8 inch shall be passivated stainless steel, alloy type 316 or type 304. Stainless steel hardware shall meet ASTM F593 and F594 for corrosion resistance. All other nuts and bolts shall meet ASTM A307 and shall be galvanized.

2.14.1. Conduit Strap

Conduit strap shall be double-hole, stainless steel, and sized to support specified conduit. Conduit strap shall attach to wood pole or post with two 2 ¼ inch wood screws.

2.14.2. Mounting Strap for Pole Mount Cabinet

Mounting strap for pole mount cabinet shall be ¾ inch x 0.03 inch stainless steel; equipped with clips or buckles to securely hold strap.

2.14.3. Metal Framing Channel and Fittings

Metal framing channel shall be 1 5/8 inches wide galvanized steel that conforms to ASTM A1011 and ASTM A653. One side of the channel shall have a continuous slot with in-turned edges to accommodate toothed fittings.

Fittings shall be punch pressed from steel plates and conform to ASTM A575 and the physical requirements of ASTM A1011.

2.15. Junction Box

2.15.1. Junction Box Type A, B, or C

Junction Box Type A, B, or C shall meet or exceed ANSI/SCTE 77-2007, Tier 15. Box shall have an open bottom. A removable, non-slip cover marked "PLANNING" shall be equipped with a lifting slot and attached with a minimum of two 3/8 inch stainless steel hex bolts and washers. Type A Box shall have nominal inside dimensions of 13 inches wide by 24 inches long by 18 inches deep. Type B Box shall have nominal inside dimensions of 11 inches wide by 18 inches long by 12

inches deep. Type C Box shall have nominal inside dimensions of 24 inches wide by 36 inches long by 30 inches deep.

2.15.2. Aggregate for Junction Box Type A, B, or C

Aggregate for junction box type A, B, or C shall be gradation size no. 57 and conform to the *Standard Specifications for Road and Bridge Construction.*

2.15.3. Junction Box 10x8x4

Junction Box Type 10x8x4 shall be constructed of a UV-stabilized, nonmetallic material or non-rusting metal and be weatherproof in accordance with NEMA 4X. Box shall be equipped with an overhanging door with a continuous durable weatherproof gasket between the body and door. Door shall be hinged with stainless steel screws, hinge(s) and pin(s) and shall be equipped with a stainless steel padlockable latch on the side opposite the hinge(s). Junction Box 10x8x4 shall have minimum inside dimensions of 10 inches high by 8 inches wide by 4 inches deep.

2.16. Maintain and Control Traffic

Materials for the bid item Maintain and Control Traffic shall conform to the *Standard Specifications for Road and Bridge Construction,* and the KYTC Department of Highways *Standard Drawings.*

2.17. Piezoelectric Sensor

Piezoelectric sensor (piezo) shall provide a consistent level voltage output signal when a vehicle axle passes over it, shall have a shielded transmission cable attached, and shall meet the following requirements:

- Dimensions: such that sensor will fit in a ¾ inch wide by 1 inch deep saw cut. Total length shall be 6 feet unless specified otherwise.
- Output uniformity: ± 7% (maximum)
- Typical output level range: 250mV (minimum) from a wheel load of 400 lbs.
- Working temperature range: -40° to 160° F.
- Sensor life: 30 million Equivalent Single Axle Loadings (minimum)

Shielded transmission cable shall be coaxial and shall meet the following requirements:

- RG 58C/U with a high density polyethylene outer jacket rated for direct burial
- Length shall be a minimum of 100 feet. Installations may exceed 100 feet so the piezo shall be supplied with a lead-in of appropriate length so that the cable can be installed splice-free from the piezo to the cabinet.
- Soldered, water resistant connection to the sensor.

One installation bracket for every 6 inches of sensor length shall also be supplied. Piezo shall be a RoadTrax BL Class I or approved equal.

2.18. Saw Slot Sealant

Saw Slot Sealant shall be non-shrink, non-stringing, moisture cure, polyurethane

encapsulant suitable for use in both asphalt and concrete pavements. It shall provide a void-free encapsulation for detector loop cables and adequate compressive yield strength and flexibility to withstand heavy vehicular traffic and normal pavement movement.

The cured encapsulant shall meet or exceed the following:

- Hardness (Indentation): 35-65 Shore A, ASTM D2240
- Tensile Strength: 150 psi minimum, ASTM D412
- Elongation: 125% minimum 2 inch/minute pull, ASTM D412
- Tack-free Drying Time: 24 hours maximum, ASTM C679
- Complete Drying Time: 30 hours maximum, KM 64-447
- Chemical Interactions (seven day cure at room temperature, 24-hour immersion, KM 64-446):
  - Motor Oil: No effect
  - Deicing Chemicals: No effect
  - Gasoline: Slight swell
  - Hydraulic Brake Fluid: No effect
  - Calcium Chloride (5%): No effect

2.19. Seeding and Protection

Material for Seeding and Protection shall be Seed Mixture Type I and conform to the *Standard Specifications for Road and Bridge Construction.*

2.20. Signs

Materials for signs shall conform to the *Standard Specifications for Road and Bridge Construction.*

2.21. Splicing Materials

2.21.1. Electrical Tape

Electrical tape shall be a premium grade, UL-listed, all-weather, vinyl-insulating tape with a minimum thickness of 7 mil. Tape shall be flame retardant and resistant to abrasion, moisture, alkalis, acids, corrosion, and weather (including ultraviolet exposure).

2.21.2. Splice Kit

Splice kit shall be inline resin-type and rated for a minimum of 600V. Resin shall be electrical insulating-type and shall provide complete moisture and insulation resistance.

2.22. Steel Reinforcing Bar

Steel reinforcing bar shall be #5 and shall conform to the *Standard Specifications for Road and Bridge Construction.*

2.23. Terminal Block

Terminal block shall be rated for a minimum of 300 V and have a minimum of six

terminal pairs with 9/16-inch nominal spacing (center to center) for connecting loop and piezoelectric sensor wires to cable assemblies. Terminal block shall have screw type terminal strips to accommodate wire with spade-tongue ends.

2.24. Warning Tape

Warning tape shall be acid and alkali resistant formulated for direct burial. Tape shall be a minimum of 3 inches wide by 4.0 mils (nominal) thick, and shall be permanently imprinted with a minimum 1 inch black legend on a red background warning of an electric line. Tape shall meet or exceed the following industry specifications:

- American Gas Association (AGA) 72-D-56
- American Petroleum Institute (API) RP 1109
- American Public Works Association (APWA) Uniform Color Code
- Department of Transportation (DOT) Office of Pipeline Safety USAS B31.8
- Federal Gas Safety Regulations S 192-321 (e)
- General Services Administration (GSA) Public Buildings Service Guide: PBS 4-1501, Amendment 2
- National Transportation Safety Board (NTSB) PSS 73-1
- Occupational Safety and Health Administration (OSHA) 1926.956 (c) (1)

2.25. Wire and Cable

All cable and wire shall be plainly marked in accordance with the National Electrical Code (NEC).

2.25.1. Loop Wire

Loop wire shall be 14 AWG, stranded, copper, single conductor, and shall conform to the International Municipal Signal Association (IMSA) Specification No. 51-7.

2.25.2. Cable No. 14/1 Pair

Cable No. 14/1 pair loop lead-in cable shall be 14 AWG, stranded, copper paired, electrically shielded conductors, and shall conform to IMSA 19-2.

2.25.3. Grounding conductor

Grounding conductor and bonding jumper shall be solid or stranded, 4 AWG bare copper.

2.25.4. Service Entrance Conductor

Service entrance conductor shall be stranded, copper, Type USE-2, sized as required to comply with the NEC.

2.25.5. Terminal for electrical wire or cable

Terminal for electrical wires or cables shall be insulated, solderless, spade tongue terminals of correct wire and stud size. Terminal for electrical wires or cables shall be incidental to the wire or cable (including piezoelectric sensor transmission cable) to be connected to terminal strips.

2.26. Wood Post

Wood post shall be Southern Pine pretreated to conform to the American Wood Preservers' Association (AWPA) C-14 and shall have minimum dimensions of 4 inches by 4 inches by 8 feet long (for Galvanized Steel Cabinet) or 4 feet long (for Junction Box 10x8x4), sawed on all four sides with both ends square.

2.27. Wooden Pole

Wooden pole shall be a Class IV wood pole of the length specified and shall conform to the *Standard Specifications for Road and Bridge Construction* except the pole shall be treated in accordance with AWPA P9 Type A.

3. CONSTRUCTION METHODS

The plans indicate the extent and general arrangement of the installation and are for guidance. When the Contractor deems any modifications to the plans or specifications necessary, details of such changes and the reasons shall be submitted in writing to the engineer for written approval prior to beginning the modified work.

After the project has been let and awarded, the Division of Construction shall notify the Division of Planning of the scheduled date for a Pre-Construction meeting so that prior arrangements can be made to attend. This will allow the Division of Planning an opportunity to address any concerns and answer any questions that the Contractor may have before beginning the work.

The Division of Planning Equipment Management Team (502-564-7183) shall be notified a minimum of seven days before any work pertaining to these specifications begins to allow their personnel the option to be present during installation.

Unless otherwise specified, installed materials shall be new.

Construction involving the installation of loops or piezoelectric sensors shall not be performed when the temperature of the pavement is less than 38ºF.

A final inspection will be performed by a member of the Central Office Division of Planning equipment staff after the installation is complete to verify that the installation is in compliance with the plans and specifications.

Any required corrective work shall be performed per the *Standard Specifications for Road and Bridge Construction.*

3.1. Anchoring

Furnish: Anchor, anchor rod, guy wire, strand vise, guy guard.

Anchor shall be installed in relatively dry and solid soil. Rock anchor shall be installed in solid rock. Excavate the hole at a 45° to 60° angle in line with the guy (hole size shall be slightly larger than the expanded anchor – see manufacturer's recommendation). Attach rod to anchor, install assembly into hole, and expand anchor. Backfill and tamp entire disturbed area. The effectiveness of the anchor is dependent upon the thoroughness of backfill tamping. Attach guy to strand vise on pole and anchor rod and tighten to required tension. Install guy guard on guy.

3.2. Bore and Jack Pipe – 2"

Furnish: Steel Encasement Pipe, 2"

Bore and jack pipe – 2" shall conform to the Section 706 of the *Standard Specifications for Road and Bridge Construction.*

3.3. Cleanup and Restoration

Furnish: Seed Mix Type 1 (as required); fertilizer (as required); agricultural limestone (as required); mulch or hydromulch (as required); tackifier (as required).

The Contractor shall be responsible for repairing any damage to public and/or private property resulting from his work. Upon completion of the work, restore all disturbed highway features in like kind design and materials. This shall include filling any ruts and leveling ground appropriately. Contractor shall dispose of all waste and debris off the project. Sow all disturbed earthen areas with Seed Mix Type 1 per Section 212 of the *Standard Specifications for Road and Bridge Construction*. All materials and labor necessary for cleanup and restoration shall be considered incidental to other bid items.

3.4. Conduit

Furnish: Conduit; conduit fittings; bushings (grounding where required); LB condulets (as required); weatherheads (as required); conduit straps; hardware; conduit sealant.

Conduit that may be subject to regular pressure from traffic shall be laid to a minimum depth of 24 inches below grade. Conduit that will not be subject to regular pressure from traffic shall be laid to a minimum depth of 18 inches below grade.

Conduit ends shall be reamed to remove burrs and sharp edges. Cuts shall be square and true so that the ends will butt together for the full circumference of the conduit. Tighten couplings until the ends of the conduit are brought together. Do not leave exposed threads. Damaged portions of the galvanized surfaces and untreated threads resulting from field cuts shall be painted with an Engineer-approved, rust inhibitive paint. Conduit bends shall have a radius of no less than 12 times the nominal diameter of the conduit, unless otherwise shown on the plans.

Contractor shall install a bushing (grounding bushing where required) on both ends of all conduits. Cap spare conduits on both ends with caps or conduit sealant.

Conduit openings in junction boxes and cabinets shall be waterproofed with a flexible, removable conduit sealant, working it around the wires, and extending it a minimum 1 inch into the end of the conduit.

After the conduit has been installed and prior to backfilling, the conduit installation shall be inspected and approved by the Engineer.

3.5. Electrical Service

Furnish: Meter base, service disconnect, wire, GFCI AC duplex receptacle with box and cover; conduit, conduit fittings, bushings (grounding where required); LB condulets (as required); weatherhead; conduit straps; hardware; conduit sealant; ground rod with clamp; grounding conductor.

Prior to any construction, the Contractor shall initiate a work order with the local power

company for the installation of electrical service to the site. A representative from the Division of Planning and the local power company shall be consulted prior to choosing an exact location for the pole. The Contractor shall clear the right-of-way for the electrical service drop.

Contractor shall obtain electrical inspections, memberships, meter base, service disconnect and any other requirements by the utility serving the installation and pay all fees as required.

Install meter-base and disconnect panel with a 30-ampere, fused, circuit breaker inside. Install a manufactured weatherproof hub connectors to connect the conduit to the top of the meter base and service disconnect.

Install a rigid ¾ inch conduit with three 8 AWG service conductors from the cabinet, through the service disconnect to the meter base and a 1¼" conduit with three 8 AWG service conductors from the meter base to a weatherhead two feet from the top of the electrical service pole. Install conduit straps 30 inches on center and provide a drip loop where the wire enters the weatherhead. Splice electric drop with service entrance conductors at the top of the pole.

The limit of conduit incidental to "Install Electrical Service" for a pad mounted cabinet is 24 inches beyond face of service pole.

Install a 120-volt, 20-amp GFCI AC duplex receptacle with box and cover in the automatic data recorder (ADR) cabinet.

Install a ground rod with clamp. Install a grounding conductor wire from the meter base, through the disconnect panel, to the ground rod clamp. Install grounding conductor in 1-¾" conduit from service disconnect to ground rod.

After completing the installation and before the electrical service is connected, obtain a certificate of compliance from the Kentucky Department of Housing, Buildings and Construction, Electrical Inspection Division.

3.6. Flashing Arrow

Furnish: Arrow Panel

Construction of Flashing Arrow shall conform to the *Standard Specifications for Road and Bridge Construction.*

3.7. Galvanized Steel Cabinet

Furnish: Cabinet; wood posts; concrete; conduit fittings; metal framing channel; pipe clamp; terminal block(s); spade tongue wire terminals; wire labels; hardware.

Where right-of-way allows, locate the cabinet such that it is outside the clear zone in accordance with the *Roadside Design Guide*. Install Cabinet such that the door of the

cabinet faces the roadway.

Excavate as required and install wood posts to a depth of 36 inches and place concrete around posts as shown on the standard detail sheets. Install metal framing channel with pipe clamp between posts.

Install Cabinet on wood posts 38 inches above the finished grade as shown on the standard detail sheets. Install a unistrut between posts when two posts are specified.

Install the required number of terminal blocks on the cabinet back plate. Install a spade tongue terminal on each loop and piezo sensor wire entering the cabinet and connect wires to terminal block(s). Wiring shall be neat and orderly. Label all wires and cables inside cabinet.

Install conduit from ground to cabinet and attach to pipe clamp. Install locknuts to attach conduit to cabinet and install a conduit bushing as shown on the standard detail sheets.

3.8. Grounding

Furnish: Ground rod with clamp; grounding conductor.

At sites with electrical or solar service, all conduits, poles, and cabinets shall be bonded to ground rods and the electrical system ground to form a complete grounded system.

Install such that top of ground rod is a minimum of 3 inches below finished grade.

Grounding systems shall have a maximum 25 ohms resistance to ground. If the resistance to ground is greater than 25 ohms, two or more ground rods connected in parallel shall be installed. Adjacent ground rods shall be separated by a minimum of 6 feet.

3.9. Install Pad Mount Enclosure

Furnish: Concrete; anchor bolts with washers and nuts; conduit; conduit fittings; conduit grounding bushings; ground rod with clamp; grounding conductor; conduit sealant; wooden stakes (where required); wire labels; hardware.

The Contractor shall be responsible for securing the enclosure from the Central Office Division of Planning Warehouse in Frankfort and transporting it to the installation site.

Where right-of-way allows, locate the enclosure such that it is outside the clear zone in accordance with the *Roadside Design Guide*.

Excavate as required, and place concrete to construct the enclosure foundation as specified on the standard detail sheets. Install enclosure on the concrete base such that the door(s) of the enclosure opens away from traffic (hinges away from traffic). Install anchor bolts, washers, and nuts to secure the enclosure to the foundation.

Install ground rod with clamp and install one ¾ inch rigid conduit from enclosure base to

ground rod. Install a grounding conductor from ground rod to enclosure base and bond to each conduit bushing in the base.

Install one ¾ inch rigid steel conduit for electrical service from the base of the enclosure to 24 inches beyond the concrete base. Make all field wiring connections to the electrical service, as applicable.

If electrical service is not provided as a bid item in the contract, plug conduit on both ends with a cap, conduit sealant, or electrical tape. Mark the location of the buried conduit end with a wooden stake labeled "3/4 in. conduit."

Install specified rigid steel conduit(s) into the base of the enclosure for sensor wire entry. Install one spare 2 inch conduit from the enclosure base to 2 feet beyond the concrete base. Plug spare conduit on both ends with a cap, conduit sealant or electrical tape.

The limit of all conduits incidental to "Install Pad Mount Enclosure" is 24 inches beyond the edge of the concrete base.

Wiring in enclosure shall be neat and orderly. Label all wires and cables inside enclosure. KYTC personnel will furnish and install terminal blocks and connect sensors to terminal blocks.

3.10. Install Controller Cabinet

Furnish: Mounting brackets; mounting straps; conduit; LB condulets; conduit fittings; conduit grounding bushings; ground rod with clamp; grounding conductor; cable staples; conduit sealant; wooden stakes (where required); wire labels; hardware.

The Contractor shall be responsible for securing the cabinet from the Central Office Division of Planning Warehouse in Frankfort and transporting it to the installation site. Any existing holes in the cabinet not to be reused shall be covered or plugged to meet NEC requirements.

Install mounting brackets and secure cabinet to pole with mounting straps.

Install a ground rod with clamp. Install grounding conductor in 1-¾" conduit form cabinet to ground rod.

Install one ¾ inch rigid steel conduit with two lb condulets from cabinet to electrical service disconnect box. Make all field wiring connections to the electrical service, as applicable.

If electrical service is not provided as a bid item in the contract, plug conduit on both ends with cap, plumbers putty, conduit sealant, or electrical tape. Mark the location of the buried conduit end with a wooden stake labeled "3/4 in. conduit".

Install specified rigid steel conduit(s) and type LB condulet(s) into the bottom of the

cabinet for sensor wire entry. The limit of conduits incidental to "Install Controller Cabinet" is 24 inches beyond the face of the pole.

Wiring in cabinet shall be neat and orderly. Label all wires and cables inside cabinet. KYTC personnel will furnish and install terminal blocks and connect sensors to terminal blocks.

3.11. Junction Box Type 10x8x4

Furnish: Junction box; wood post; conduit fittings; wire labels; hardware.

Where right-of-way allows, locate the junction box such that it is outside the clear zone in accordance with the Roadside Design Guide.

Excavate as required and install wood post(s) to a depth of 18 inches. Install junction box on wood post such that the bottom of the box is 18 inches above the finished grade as shown on the standard detail sheets. Box shall be installed with four (4) 2½ inch wood screws and washers.

Install locknuts to attach conduit to junction box and install a conduit bushing as shown on the standard detail sheets.

Wiring inside box shall be neat and orderly. Label all wires and cables inside box.

3.12. Junction Box Type A, B, or C

Furnish: Junction box, No. 57 aggregate; grounding conductor

Excavate as required and place approximately 12 inches of No. 57 aggregate beneath the proposed junction box to allow for drainage. Install specified junction box type A, B, or C near the edge of pavement, flush with finished grade per the detail sheets. Where required, orient the box so that the dimensions comply with the National Electrical Code. Stub conduits with grounding bushings into junction box at its base to accommodate wires and connect grounding conductor to all grounding bushings. Backfill to existing grade, and restore disturbed area to the satisfaction of the Engineer.

Wiring inside box shall be neat and orderly. Label all wires and cables inside box.

3.13. Loops - Proposed

Furnish: Wire; saw slot sealant; backer rod; grout; conduit sealant.

The plans and notes specify the approximate location for loop installations. Prior to sawing slots or drilling cores, the Contractor shall meet with a representative of the Division of Planning to verify the precise layout locations on site. Avoid expansion joints and pavement sections where potholes, cracks, or other roadway flaws exist.

Upon completion of this meeting, the Contractor shall measure out and mark the proposed loop locations with spray paint or chalk such that the saw slots will be parallel

and perpendicular to the direction of traffic. Marked lines shall be straight and exact to the locations determined and sized as shown on the plans. Unless indicated otherwise, loops shall be 6 feet by 6 feet square and loops in the same lane shall be spaced 16 feet from leading edge to leading edge.

On resurfacing, rehabilitation, and new construction projects that include new asphalt pavement, the Contractor shall install loops prior to laying the final surface course. On projects with milling and texturing, the Contractor may install the loops prior to or after the milling operation; however, if installed prior to milling, the Contractor shall be responsible for ensuring that the loops are installed at a depth such that the milling operation will not disturb the newly installed loops. The Contractor shall correct damage caused by the milling operations to newly installed loops prior to placement of the final surface course at no additional cost to the Cabinet.

For projects that include the installation of new asphalt and piezoelectric sensors, the Contractor shall mark or otherwise reference all loops installed prior to the final surface course such that the loops can be accurately located when the piezoelectric sensors are installed after placement of the final surface course.

For projects that do not have asphalt surfacing, the Contractor shall install the loops in the surface of the pavement.

The Prime Contractor shall coordinate the installation of loops with the electrical sub-Contractor and the Engineer to ensure correct operation of the completed installation.

The following is a typical step by step procedure for the installation of a loop.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and centered in the lane.
- Make each saw-cut 3/8-inch wide and at a depth such that the top of the backer rod is a minimum of 2 inches below the surface of rigid (PCC/Concrete) pavement or 4 inches below the surface of asphalt pavement.
- Drill a 1½ inch core hole at each corner and use a chisel to smooth corners to prevent sharp bends in the wire.
- Clean ALL foreign and loose matter out of the slots and drilled cores and within 1 foot on all sides of the slots using a high pressure washer.
- Completely dry the slots and drilled cores and within 1 foot on all sides of the slots using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.
- Closely inspect all cuts, cores, and slots for jagged edges or protrusions prior to the placement of the wire. All jagged edges and protrusions shall be ground or re-cut and cleaned again.

- Place the loop wire splice-free from the termination point (cabinet or junction box) to the loop, continue around the loop for four turns, and return to the termination point.
- Push the wire into the saw slot with a blunt object such as a wooden stick. Make sure that the loop wire is pushed fully to the bottom of the saw slot.
- Install conduit sealant to a minimum of 1" deep into the cored 1½ inch hole.
- Apply loop sealant from the bottom up and fully encapsulate the loop wires in the saw slot. The wire should not be able to move when the sealant has set.
- Cover the encapsulated loop wire with a continuous layer of backer rod along the entire loop and home run saw slots such that no voids are present between the loop sealant and backer rod.
- Finish filling the saw cut with non-shrinkable grout per manufacturer's instructions. Alleviate all air pockets and refill low spaces. There shall be no concave portion to the grout in the saw slot. Any excess grout shall be cleaned from the roadway to alleviate tracking.
- Clean up the site and dispose of all waste off the project.
- Ensure that the grout has completely cured prior to subjecting the loop to traffic. Curing time varies with temperature and humidity.

Exceptions to installing loop wire splice-free to the junction box or cabinet may be considered on a case-by-case basis and must be pre-approved by the Engineer. If splices are allowed, they shall be located in a junction box and shall conform to the construction note for Splicing.

If loop lead-in cable (Cable No. 14/1 Pair) is specified, cable shall be installed splice free to the cabinet ensuring that extra cable is left in each junction box or cabinet. All wires and cables shall be labeled in each junction box and cabinet.

Loop inductance readings shall be between 100 and 300 microhenries. The difference of the loop inductance between two loops in the same lane shall be ±20 microhenries. Inductance loop conductors shall test free of shorts and grounds. Upon completion of the project, all loops must pass an insulation resistance test of at least 100 million ohms to ground when tested with a 500 Volt direct current potential in a reasonably dry atmosphere between conductors and ground.

3.14. Loops – Existing

When noted on a data collection station layout sheet that there are existing inductive loops within the limits of the project, notify the Engineer in writing, a minimum of 14 calendar days prior to beginning milling operations. After milling and prior to placing asphalt inlay, conduct an operating test on the existing inductance loops at the control cabinet in the presence of the Engineer to determine if the inductance loop conductors have an insulating resistance of a minimum of 100 megohms when tested with a 500 volt direct current potential in a reasonably dry atmosphere between conductors and ground. The Department may also conduct its own tests with its own equipment.

If the tests indicate the loop resistances are above the specified limit and the Engineer determines the system is operable, proceed with the asphalt inlay. If the test indicates the loop resistance is not within the specified limits or if the Engineer determines the system is otherwise not operable, prior to placing the asphalt inlay install and test new loop detectors according to the station layout, notes, and Detail Drawings.

The Engineer will contact and maintain liaison with the District Planning Engineer and the Division of Planning in order to coordinate any necessary work.

3.15. Maintain and Control Traffic

Furnish (all as required): Drums, traffic cones, barricades used for channelization purposes, delineators, and object markers.

Maintain and Control Traffic shall conform to the plans, the Standard Specifications for Road and Bridge Construction, and the KYTC Department of Highways Standard Drawings.

3.16. Open Cut Roadway

Furnish: Concrete, reinforcing bars.

Excavate trench by sawing and chipping away roadway to dimensions as indicated on the detail sheets. After placing conduit, install concrete and steel reinforcing bars per the *Standard Specifications for Road and Bridge Construction.* Restore any disturbed sidewalk to its original condition.

3.17. Piezoelectric Sensor

Furnish: Piezoelectric sensor and cable; sensor support brackets; saw slot sealant; backer rod; grout; conduit sealant.

The plans and notes specify the approximate location for piezoelectric sensor (piezo) installations. Prior to sawing slots or drilling cores, the Contractor shall meet with a representative of the Division of Planning to verify the final layout on site. Avoid expansion joints and pavement sections where potholes, cracks, or other roadway flaws exist. Roadway ruts at the proposed piezo location shall not be in excess of ½ inch under a 4-foot straight edge.

Install the piezo perpendicular to traffic in the final surface course of the pavement. Locate the sensor in the lane as shown on the site layout drawing. Eleven-foot length sensors shall be centered in the lane.

The following is a typical step by step procedure for the installation of a piezo. Refer specifically to the manufacturer's instructions provided with the sensor prior to installation.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and properly positioned in the lane.

- It is strongly recommended that a ¾ inch wide diamond blade be used for cutting the slot, or that blades be ganged together to provide a single ¾ inch wide cut. The slot shall be wet cut to minimize damage to the pavement.
- Cut a slot ¾ inch wide (±1/16 inch) by 1 inch minimum deep. The slot should be a minimum of 2 inches longer than the sensor (including the lead attachment). Drop the saw blade an extra ½ inch down on both ends of the sensor. The lead out of the passive cable should be centered on the slot.
- Cut the slot for the passive cable ¼ inch wide and at a depth so that the top of the backer rod is a minimum of 2 inches below the road surface.
- Clean ALL foreign and loose matter out of the slot and within 1 foot on all sides of the slot using a high pressure washer.
- Completely dry the slot and within 1 foot on all sides of the slot using oil-free forced air, torpedo heaters, electric heaters, or natural evaporation, depending on weather conditions. Be very careful not to burn the asphalt if heat is used.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.
- Place strips of 2-4 inch wide tape strips on the pavement along the lengths of both sides of the sensor slot, 1/8 inch away from the slot.
- Wear clean, protective latex (or equivalent) gloves at all times when handling sensors. Visually inspect sensor to ensure it is straight. Check lead attachment and passive cable for cuts, gaps, cracks and/or bare wire. Verify that the correct sensor type and length is being installed by checking the data sheet. Verify there is sufficient cable to reach the cabinet. Piezo lead-in cable shall not be spliced.
- Test the sensor for capacitance, dissipation factor and resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within ±20% of the piezo data sheet. Resistance (using the 20M setting) should be infinite. Record the sensor serial number and the test results and label “pre-installation.” This information should be stored in the counter cabinet and/or returned to Department Planning personnel.
- Lay the sensor next to the slot and ensure that it is straight and flat.
- Clean the sensor with steel wool or an emery pad and wipe with alcohol and a clean, lint-free cloth.
- Place the installation bracket clips every 6 inches along the length of the sensor.
- Bend the tip of the sensor downward at a 30° angle. Bend the lead attachment end down at a 15° angle and then 15° back up until level (forming a lazy Z).
- Place the sensor in the slot, with the brass element 3/8 inch below the road surface along the entire length. The tip of the sensor should be a minimum of 2 inches from the end of the slot and should not touch the bottom of the slot. The top of the plastic installation bracket clips should be 1/8 inch below the surface of the road. The lead attachment should not touch the bottom or sides of the slot. Ensure the sensor ends are pushed down per the manufacturer’s instructions.
- Visually inspect the length of the sensor to ensure it is at uniform depth along its length and it is level (not twisted, canted or bent).

- On the passive cable end, block the end of the slot approximately 3-5 inches beyond the end of the lead attachment area creating an adequate "dam" so that the sensor grout does not flow out.
- Use one bucket of sensor grout per piezo installation. Overfill the slot with sensor grout and allow to cure for a minimum of 10 minutes before continuing with the installation. Ensure that sensor grout fills around and beneath the sensor completely and that there is not a trough on top.
- Remove the tape along the sides of the saw slot when the adhesive starts to cure.
- Carefully remove the dam from the end of the sensor.
- Route the lead-in cable through the saw slot
- Install conduit sealant to a minimum of 1" deep into the cored 1½ inch hole.
- Cover the lead-in cable with encapsulant, backer rod, and grout.
- If necessary, after the grout has hardened, grind with an angle grinder until the profile is a 1/16 inch mound. There shall be no concave portion to the mound.
- Clean up the site and dispose of all waste off the project.
- Ensure that the sensor grout has completely cured prior to subjecting the sensor to traffic. Curing time will vary with temperature and humidity.

Upon installation, test the sensor for capacitance, dissipation factor and resistance, according to the directions enclosed with the sensor. Capacitance and dissipation should be within +20% of the piezo data sheet. Resistance (using the 20M setting) should be infinite. Perform a functional test of the piezo with an oscilloscope to ensure that the sensor is generating a proper response to the passage of vehicles.

Record the sensor serial number and the test results and label "post-installation." This information should be stored in the counter cabinet and/or returned to Department Planning personnel.

3.18. Pole – Wooden

Furnish: Pole; anchoring equipment (as required); hardware (as required).

Excavate and install wood pole to a minimum depth of one-sixth the total pole height. Place backfill material in hole and compact until flush with existing grade. Install guy wire, guy guard, anchor, anchor rod, and strand vise, if necessary. Anchor shall be a minimum of one-third the pole height from the face of the pole. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer.

3.19. Removal of Existing Equipment

The Contractor shall remove existing materials (including but not limited to: poles, anchors, cabinets, junction boxes, conduit and wire) not to be reused. Contractor shall dispose of all removed materials off the project. All materials and labor necessary for the removal of existing equipment shall be considered incidental to other bid items.

3.20. Signs

Furnish: Signs; sign standards; hardware.

Construction of **s**igns shall conform to the *Standard Specifications for Road and Bridge Construction.*

3.21. Splicing

Furnish: Splice kit; solder.

These notes describe the splicing process (if permitted) and are not intended to grant permission to splice. Permission to splice shall be determined by the Division of Planning and the locations shall be shown on the layout sheet. If splicing is needed but not shown on the layout sheet, the Contractor shall receive prior written approval from the Division of Planning.

All splices shall conform to the provisions of the NEC.

Splices for loop and loop lead-in wire shall be twisted and soldered. Abrade the outer jacket of both wires to promote good adhesion and prevent capillary leak paths. Seal the splice with an electrical sealing resin. Spliced loop conductors shall test free of shorts and unauthorized grounds and shall have an insulating resistance of at least 100 megohms when tested with a 500 volt direct current potential in a reasonably dry atmosphere between conductors and ground.

For piezos, the same type coax cable, supplied by the manufacturer, shall be used to splice to the sensor's lead-in cable. Cables shall be soldered. Abrade the outer jacket of both cables to promote good adhesion and prevent capillary leak paths. Seal the splice with an electrical sealing resin. Spliced piezo cables shall be tested and have a minimum resistance of 20 megohms, a maximum dissipation factor of 0.03, a capacitance within the manufacturer's recommended range based upon the length of additional cable. A functional test of the piezo shall be performed to ensure that the sensor is generating a proper response to the passage of vehicles.

3.22. Trenching and Backfilling

Furnish: Warning tape; seed mix type I; cereal rye or German foxtail-millet; mulch; concrete (as required); asphalt (as required).

Excavate trench and provide required cover as shown on the standard detail sheets. After placing conduit, backfill material shall be placed and compacted in lifts of 9 inches or less. Install warning tape as shown on the detail sheet. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer. This item shall include concrete, asphalt or approved replacement material for sidewalks, curbs, roadways, etc. (if required).

3.23. Wiring

Furnish: Wire; wire labels; spade tongue wire terminals (as required).

Installation of all wiring shall conform to the NEC. Permanent identification numbers shall be affixed to all wires in all junction boxes and cabinets (see Layout(s) for loop and piezo numbers).

Additional lengths of each loop and piezo sensor wire shall be neatly coiled in all cabinets and junction boxes as follows:

Enclosure Type	Additional length of each wire
Galvanized Steel Cabinet	2’
Pad Mount Cabinet (332)	8’
Pole Mount Cabinet (336)	4’
Junction Box Type 10x8x4	2’
Junction Box Type A, B, or C	2’

3.24. Wood Post

Furnish: Wood post; concrete (as required); seed mix type I; cereal rye or German foxtail-millet; mulch.

Excavate hole to specified depth and place concrete, if required. Install post, backfill to existing grade, and tamp backfill. Provide temporary erosion control, seeding, protection and restoration of disturbed areas to the satisfaction of the Engineer.

4. BID ITEM NOTES AND METHOD OF MEASUREMENT FOR PAYMENT

Only the bid items listed will be measured for payment. All other items required to complete the vehicle detection installation shall be incidental to other items of work. Payment at the contract unit price shall be full compensation for all materials, labor, equipment and incidentals to furnish and install these items.

4.1. Bore and Jack Pipe – 2”

Bore and jack pipe – 2” shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction*.

4.2. Conduit

Conduit shall include furnishing and installing specified conduit in accordance with the specifications. This item shall include conduit fittings, bodies, boxes, weatherheads, expansion joints, couplings, caps, conduit sealant, electrical tape, clamps, bonding straps and any other necessary hardware. Conduit will be measured in linear feet.

4.3. Electrical Service

Electrical Service shall include furnishing and installing all necessary materials and payment of all fees toward the complete installation of an electrical service which has passed all required inspections. Incidental to this item shall be furnishing and installing:

- Meter-base per utility company’s specifications
- Service disconnect panel per utility company’s specifications
- Meter base and service disconnect entrance hubs, waterproof
- Service entrance conductors
- Rigid steel conduit
- Rigid steel conduit fittings
- Conduit straps
- Weatherhead
- Duplex GFCI receptacle, 120-volt, 20-amp
- Ground rod with clamp
- Grounding conductor

Also incidental to this item shall be any necessary clearing of right of way for the electrical service drop.

Electrical service will be measured in individual units each.

4.4. Flashing Arrow

Flashing Arrow shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction.*

4.5. Galvanized Steel Cabinet

Galvanized Steel Cabinet shall include furnishing and installing galvanized steel cabinet on post as specified. Incidental to this item shall be furnishing and installing grounding hardware, and any necessary post/pole mounting hardware. Also incidental to this item shall be furnishing and installing the required number of terminal blocks and connection of all

sensors to the terminal blocks. Galvanized Steel Cabinet will be measured in individual units each.

4.6. Install Pad Mount Enclosure

Install Pad Mount Enclosure shall include installing a Department-furnished enclosure as specified on the detail sheets.

This item shall include obtaining the enclosure from KYTC and transporting it to the installation site and furnishing and installing the following:

- Concrete foundation (including any excavation necessary)
- Anchor bolts, lock washers, and nuts
- Conduit
- Conduit fittings (including grounding bushings)
- Weatherhead
- Terminal Strip(s)
- Ground rod with clamp
- Grounding conductor

Install Pad Mount Enclosure will be measured in individual units each.

4.7. Install Controller Cabinet

Install Controller Cabinet shall include installing a Department-furnished cabinet as specified on the detail sheets.

This item shall include obtaining the cabinet from KYTC and transporting it to the installation site and furnishing and installing the following:

- Conduit
- Conduit Fittings
- Terminal Strip(s)
- Ground rod with clamp
- Grounding conductor

Install Controller Cabinet will be measured in individual units each.

4.8. Junction Box Type 10" x 8" x 4"

Junction Box Type 10”x8”x4” shall include furnishing and installing specified junction box in accordance with the specifications. This item shall include connectors, splice sleeves, conduit fittings, mounting materials and any other items required to complete the installation. Incidental to this item shall be furnishing and installing specified post (wood, channel, metal, etc.) as required for the installation. Junction Box Type 10”x8”x4” will be measured in individual units each.

4.9. Junction Box Type A, B, or C

Junction Box Type A, B, or C shall include furnishing and installing specified junction box in accordance with the specifications. This item shall include excavation, furnishing and installing #57 aggregate, backfilling around the box, and restoration of disturbed areas to the satisfaction of the Engineer. Incidental to this item shall be furnishing and installing a

grounding conductor bonding all conduit grounding bushings in the box. Junction Box Type A, B, or C will be measured in individual units each.

4.10. Loop Saw Slot and Fill

Loop Saw Slot and Fill shall include sawing and cleaning saw slots and furnishing and installing conduit sealant, loop sealant, backer rod, grout, or other specified material. Loop Saw Slot and Fill will be measured in linear feet of sawed slot.

4.11. Maintain and Control Traffic

Maintain and Control Traffic shall be measured for payment per the *Standard Specifications for Road and Bridge Construction.*

4.12. Open Cut Roadway

Open Cut Roadway shall include excavating trench (sawing and chipping roadway) to dimensions as indicated on the detail sheets and furnishing and placing concrete, steel reinforcing bars, and asphalt. This item also includes restoring any disturbed sidewalk to its original condition. Open Cut Roadway will be measured in linear feet.

4.13. Piezoelectric Sensor

Piezoelectric sensor (piezo) shall include sawing and cleaning saw slots and furnishing and installing piezo in accordance with the specifications. This item shall include furnishing and installing lead-in wire, conduit sealant, encapsulation material, backer rod, grout, testing, and accessories. Piezo will be measured in individual units each.

4.14. Pole – 35’ Wooden

Pole – 35’ Wooden shall include excavation, furnishing and installing specified wood pole, backfilling and restoring disturbed areas to the satisfaction of the Engineer. Incidental to this item shall be furnishing and installing guy wire, anchor and anchor rod, strand vise, and guy guard, if specified.

Pole – 35’ Wooden will be measured in individual units each.

4.15. Signs

Signs shall be furnished, installed, and measured for payment per the *Standard Specifications for Road and Bridge Construction.*

4.16. Trenching and Backfilling

Trenching and Backfilling shall include excavation, warning tape, backfilling, temporary erosion control, seeding, protection and restoration of disturbed areas to original condition. This item shall include concrete, asphalt or approved replacement material for sidewalks, curbs, roadways, etc. (if required). Trenching and backfilling will be measured in linear feet.

4.17. Wire or Cable

Wire or cable shall include furnishing and installing specified wire or cable within saw slot, conduit, junction box, cabinet, or overhead as indicated on the detail sheets. Incidental to this item shall be the labeling of all wires and cables in each junction box, cabinet and splice

box, and furnishing and installing other hardware required for installing cable. Wire or Cable will be measured in linear feet.

4.18. Wood Post

Wood Post shall include furnishing and installing wood post as specified. This item shall include excavation, furnishing and placing concrete (if required), backfilling around the post, and restoration of disturbed areas to the satisfaction of the engineer. Wood Post will be measured in individual units each.

SPECIAL NOTE FOR AUTOMATIC TRAFFIC RECORDER INDUCTANCE LOOPS

Be advised, existing traffic counting inductance loops are within the construction limits of this project. Notify the Engineer in writing, a minimum of 14 days prior to beginning any work. Install and test the new inductance loops and axle sensors according to the detail drawings and the Special Notes for Installation of Traffic Counting Inductance Loops and Axle Sensors. Install and verify operation of the new inductance loops prior to resurfacing activities beginning.

The Contractor is to contact the Division of Planning to coordinate the installation of the new Planning work items. Keep the Section Engineer apprised of the location and installation schedule.

On projects that require milling, the Contractor shall ensure the remaining contents of the existing saw slot (grout, loop wires, backer rod, and/or loop sealant) are flush with or below the top of the milled portion of the asphalt. In addition, if the saw slot is filled with fines from the milling operation, the Contractor shall clear the saw slot of loose remnant contents and refill the saw slot with natural sand or grout. Obtain the Engineer's approval of the stabilized saw slot prior to resurfacing. The Department will not measure for separate payment clearing the saw slot and refilling with natural sand, but shall be incidental to Asphalt Pavement Milling and Texturing.

SPECIAL NOTE FOR TRAFFIC SIGNAL LOOP DETECTORS

I. DESCRIPTION.

Be advised there are existing traffic signal loop detectors within the construction limits of this project. Except as specified herein, perform traffic signal loop replacement in accordance with the Department's Standard and Supplemental Specifications and Standard and Sepia Drawings, current editions. Article references are to the Standard Specifications. Furnish all materials, labor, equipment, and incidentals for replacement of traffic signal loop installation(s) and all other work specified as part of this contract.

II. MATERIALS.

Except as specified herein, furnish materials in accordance with Section 723. Provide for materials to be sampled and tested in accordance with the Department's Sampling Manual. Make materials available for sampling a sufficient time in advance of the use of the materials to allow for the necessary time for testing, unless otherwise specified in these Notes.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Sand. Furnish natural sand meeting the requirements of 804.04.01.

C. Seeding. Use Seed Mix Type I.

D. Loop Saw Slot and Fill. Furnish loop sealant, backer rod, and non-shrink grout according to the Saw Slot Detail.

III. CONSTRUCTION METHODS.

Except as specified herein, install and test Traffic Signal Loop Detectors in accordance with Section 723 and the drawings.

A. Coordination. Notify the Engineer in writing, two (2) weeks prior to beginning any work. The Engineer will contact and maintain liaison with the District Traffic Engineer and the Central Office Division of Traffic Operations to coordinate the Department’s operations with the Contractor’s work.

B. Maintain and Control Traffic. See Traffic Control Plan.

C. Milling. On projects involving milling and texturing of the existing pavement, install loops in the existing pavement before performing the milling and texturing. If, after milling, the remnant contents of the existing saw slot (grout, loop wires, backer rod, and/or loop sealant) are not intact and flush with or below the top of the milled portion of the asphalt and with the saw slot completely filled with fines from the milling operation,

clear the saw slot of loose remnant contents and refill the saw slot with natural sand. Obtain the Engineer's approval of the stabilized saw slot prior to resurfacing.

D. Loop Saw Slot and Fill. The following is a typical step by step procedure for the installation of a loop.

- Carefully mark the slot to be cut, perpendicular to the flow of traffic and centered in the lane.
- Make each saw-cut 3/8-inch wide and at a depth such that the top of the backer rod is a minimum of 4 inches below the surface of asphalt pavement.
- Drill a 1½ inch core hole at each corner and use a chisel to smooth corners to prevent sharp bends in the wire.
- Clean ALL foreign and loose matter out of the slots and drilled cores and within 1 foot on all sides of the slots using a high pressure washer.
- Completely dry the slots and drilled cores and within 1 foot on all sides of the slots.
- Measure 9-12 inches from the edge of the paved surface (shoulder break or face of curb) and drill a 1½ inch hole on a 45º angle to the conduit adjacent to the roadway.
- Closely inspect all cuts, cores, and slots for jagged edges or protrusions prior to the placement of the wire. All jagged edges and protrusions shall be ground or re-cut and cleaned again.
- Place the loop wire splice-free from the termination point (cabinet or junction box) to the loop, continue around the loop for two turns (6'x30' loop) or three turns (6'x6' loop), and return to the termination point.
- Push the wire into the saw slot with a blunt object such as a wooden stick. Make sure that the loop wire is pushed fully to the bottom of the saw slot. Screwdrivers shall not be used.
- Install duct sealant to a minimum of 1" deep into the cored 1½ inch hole.
- Apply loop sealant from the bottom up and fully encapsulate the loop wires in the saw slot. The wire should not be able to move when the sealant has set.
- Cover the encapsulated loop wire with a continuous layer of backer rod along the entire loop and home run saw slots such that no voids are present between the loop sealant and backer rod.
- Finish filling the saw cut with non-shrinkable grout per manufacturer's instructions. Alleviate all air pockets and refill low spaces. There shall be no concave portion to the grout in the saw slot. Any excess grout shall be cleaned from the roadway to alleviate tracking.
- Clean up the site and dispose of all waste off the project.
- Ensure that the grout has completely cured prior to subjecting the loop to traffic. Curing time varies with temperature and humidity.

E. Final Dressing, Clean Up, and Seeding. After all work is completed, clean work sites and all disturbed areas. Dispose of all waste and debris off the right of way at sites obtained by the Contractor at no additional cost to the Department. Sow all disturbed earthen areas with Seed Mix Type I.

F. Property Damage. Be responsible for all damage to public and/or private property resulting from the work. Upon completion of the work, restore all disturbed highway features and private property in like kind design and materials at no additional cost to the Department.

G. On-Site Inspection. Make a thorough inspection of the site prior to submitting bid and become thoroughly familiar with existing conditions so that the work can be expeditiously performed after a contract is awarded. The Department will consider submission of a bid as evidence of this inspection having been made. The Department will not honor any claims resulting from site conditions.

H. Right-of-Way Limits. The Department has not established exact limits of Right-of-Way. Limit work activities to obvious Right-of-Way and work areas secured by the Department through Consent and Release of the adjacent property owners. Be responsible for all encroachments onto private lands.

I. Utility Clearance. Work around and do not disturb existing utilities. The Department does not anticipate that existing utilities will require relocation; however, if utility relocation is required, the utility companies will work concurrently with the Contractor while relocating their facilities.

J. Caution. Consider the information in this proposal and shown on the plans and the type of work listed herein to be approximate. Do not take the information to be an accurate evaluation of the materials and conditions to be encountered during construction. The bidder must draw his own conclusions as to the conditions encountered. The Department does not give any guarantee as to the accuracy of the data and will not consider any claims for additional compensation if the conditions encountered are not in accordance with the information shown.

K. Control. Perform all work under under the absolute control of the Department of Highways. Obtain the Engineer's approval of all designs required to be furnished by the Contractor prior to incorporation into the work. The Department reserves the right to have other work performed by other contractors and its own forces and to permit public utility companies and others to do work during the construction within the limits of, or adjacent to, the project. Conduct operations and cooperate with such other parties so that interference with each other's work will be reduced to a minimum. By submitting bid, the Contractor agrees to make no claims against the Department for additional compensation due to delays or other conditions created by the operations of such other parties. Should a difference of opinion arise as to the rights of the Contractor and others working within the limits of, or adjacent to, the project, the Engineer will decide as to the respective rights of the various parties involved in order to assure the completion of the work in general harmony and in a satisfactory manner, and his decision shall be final and binding upon the Contractor.

IV. MEASUREMENT.

The Department will measure for payment only the bid items listed. All other items required to complete the construction shall be incidental to the bid items listed.

A. Maintain and Control Traffic. See Traffic Control Plan.

B. Traffic Signal Loop detectors. See Section 723.04.

C. Sand. The department will not measure natural sand used to fill existing loop slots after milling, but shall be incidental to Milling and Texturing

V. PAYMENT. The Department will make payment for the completed and accepted quantities of listed items according to Section 723.05. The Department will consider payment as full compensation for all work required under these notes and the Standard Specifications.

Traffic Signal Loop Detectors
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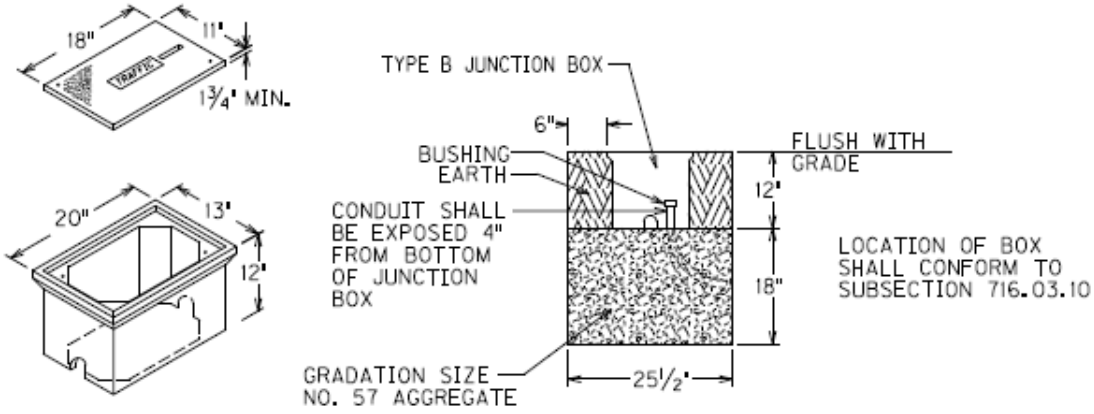
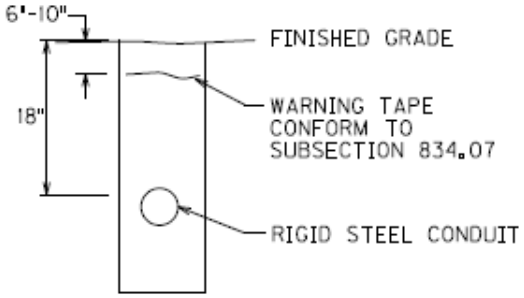


ELECTRICAL JUNCTION BOX TYPE B



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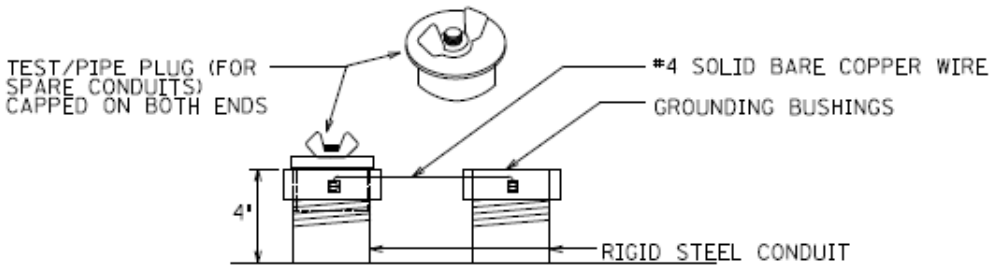
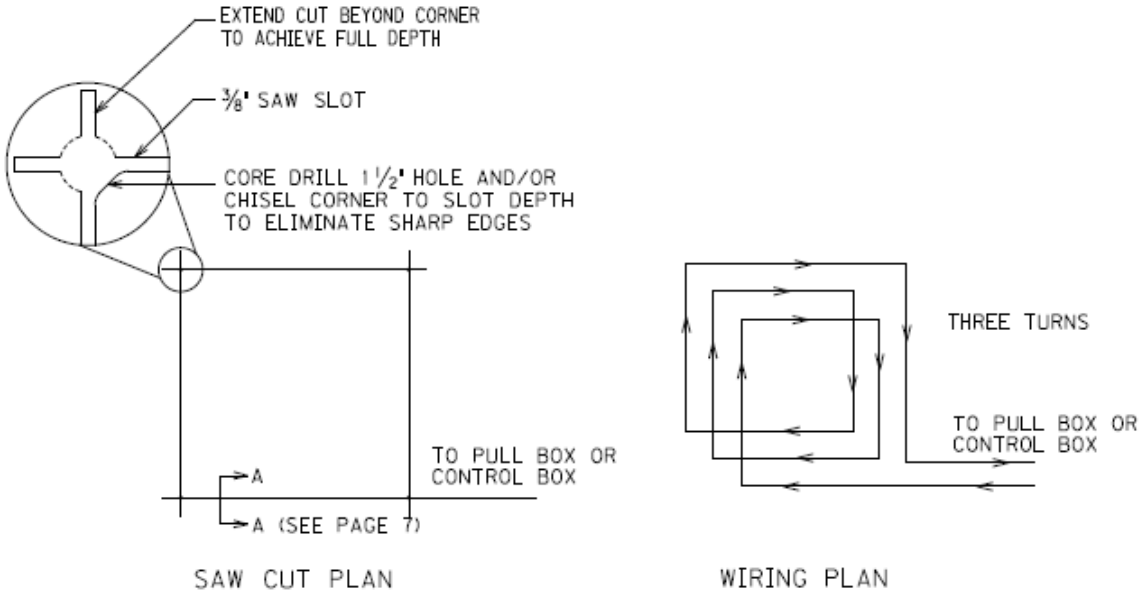
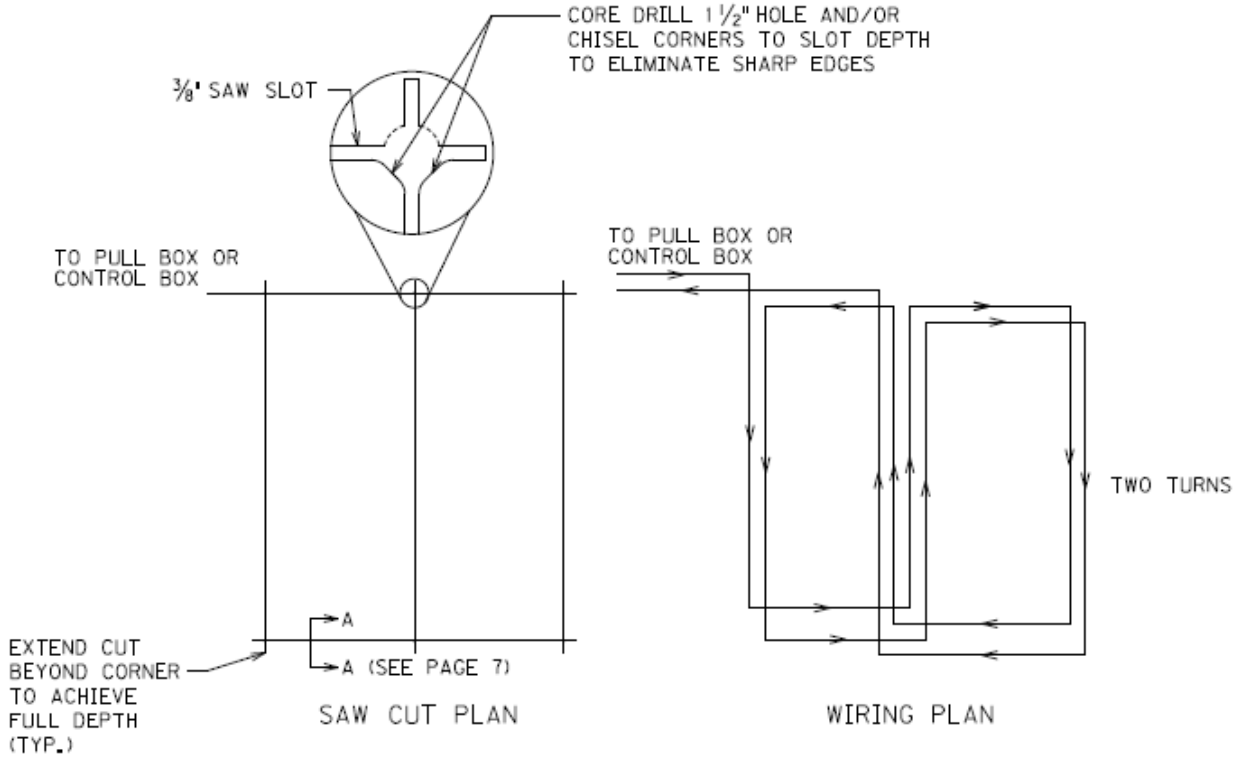


TYPICAL GROUNDING DETAIL

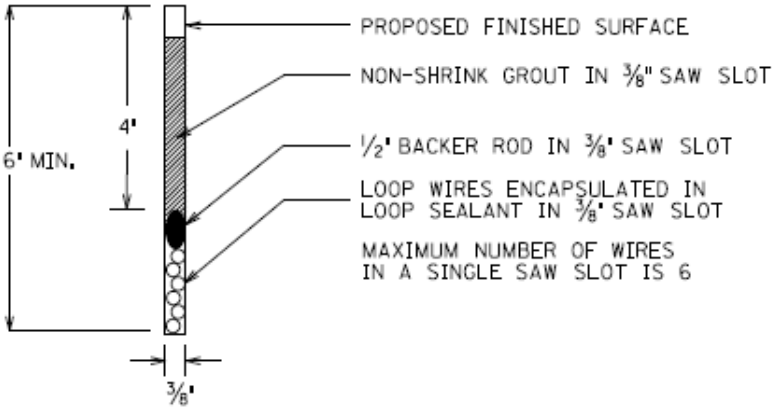
Traffic Signal Loop Detectors
Page 6 of 7



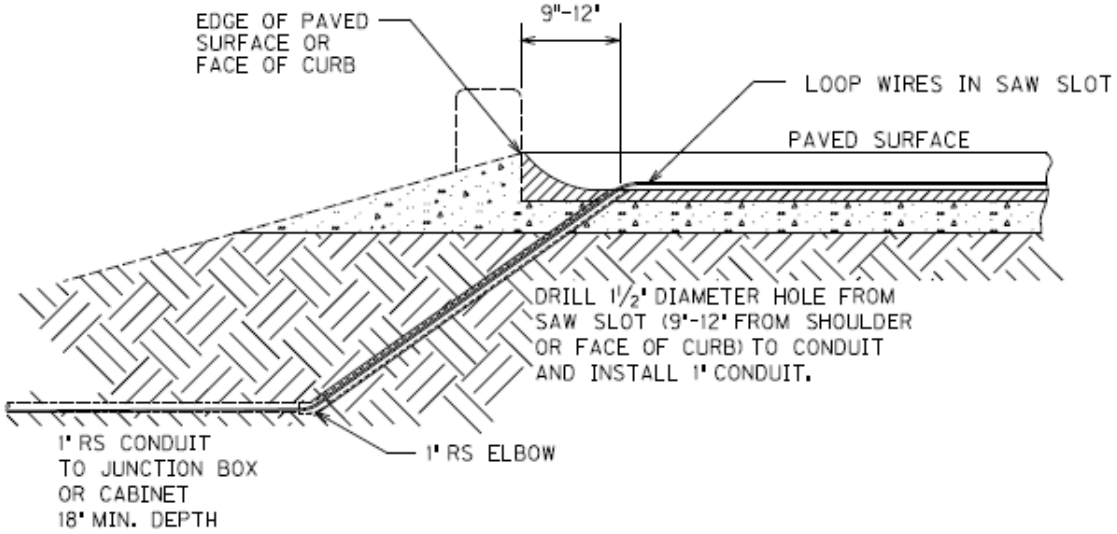
6'X6' LOOP



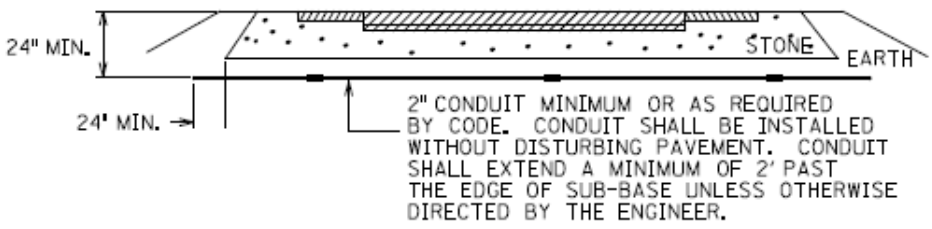
6'X30' QUADRAPOLE LOOP



SECTION A-A (SAW SLOT DETAIL)



SAW SLOT EDGE OF PAVEMENT TRANSITION



CONDUIT UNDER EXISTING PAVEMENT DETAIL

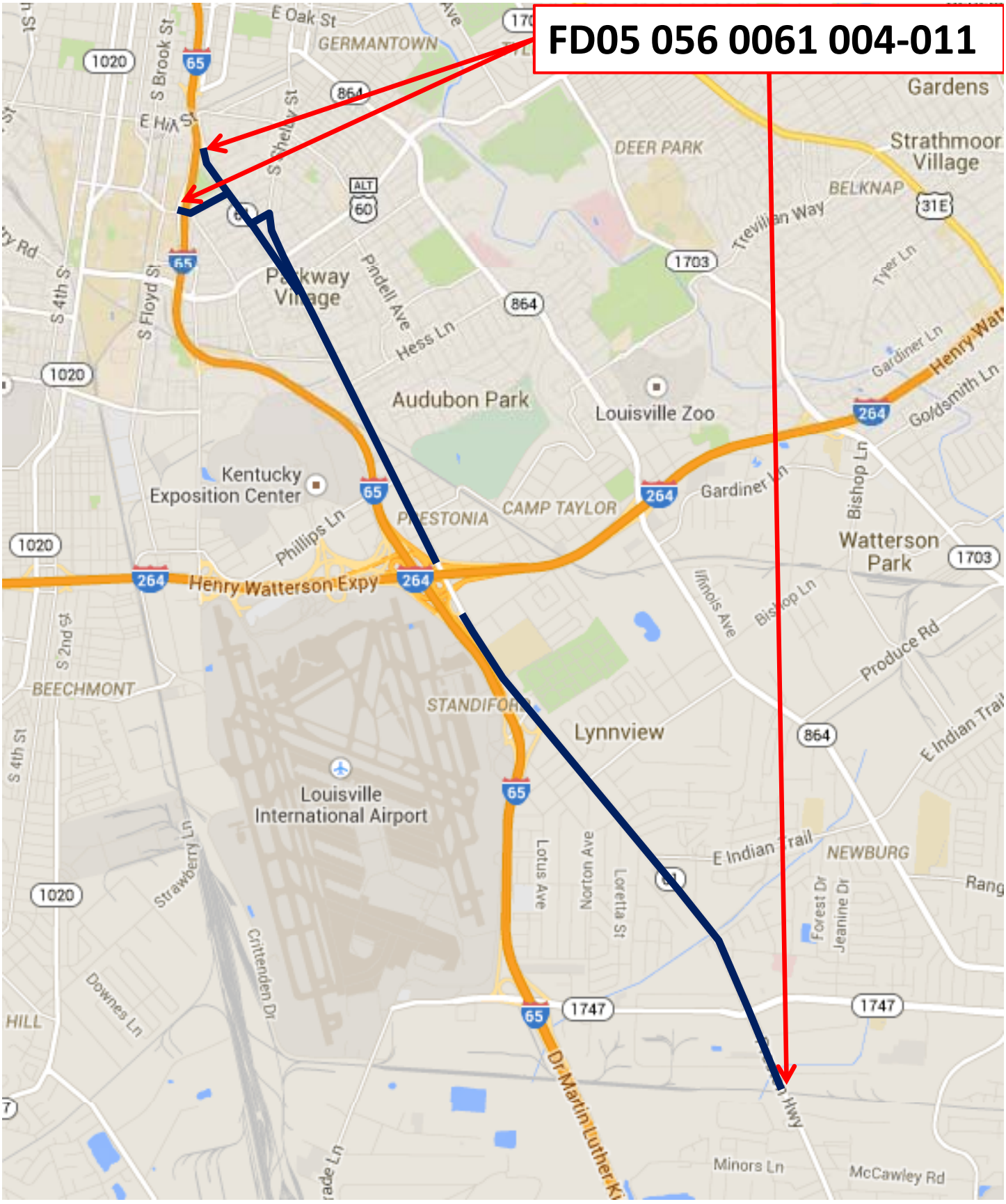
SPECIAL NOTES FOR TRAFFIC SIGNAL LOOP DETECTORS
CITY OF LOUISVILLE

Be advised, existing traffic signal loop detectors are within the construction limits of this project. Notify the Engineer in writing, two (2) weeks prior to beginning any work on the project. Install and test the new signal loops according to the Special Notes for Traffic Signal Loop Replacement. Install and verify operation of all new signal loops prior to resurfacing activities. Any loop corrective work shall be completed prior to resurfacing.

Schedule signal loop installation to ensure the new loops are spliced and operational within 5 calendar days of the old loops being damaged and/or disconnected. This requirement includes damage caused by any work activity associated with the project. If the new signal loops are not functioning as intended following 5 calendar days, the Department may assess Liquidated Damages at a rate of $500 per calendar day until the traffic signal is operating at pre-construction conditions. All liquidated damages will be applied cumulatively.

The Engineer will contact and maintain liaison with the District Traffic Engineer and the City of Louisville to coordinate any necessary work.

On projects that require milling, the Contractor shall ensure the remaining contents of the existing saw slot (grout, loop wires, backer rod, and/or loop sealant) are flush with or below the top of the milled portion of the asphalt. In addition, if the saw slot is filled with fines from the milling operation, the Contractor shall clear the saw slot of loose remnant contents and refill the saw slot with natural sand or grout. Obtain the Engineer's approval of the stabilized saw slot prior to resurfacing. Obtain the Engineer's approval of the stabilized saw slot prior to resurfacing. The Department will not measure for separate payment clearing the saw slot and refilling with natural sand or grout, but shall consider it incidental to Asphalt Pavement Milling and Texturing.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GERMANTOWN
E Oak St
S Brook St
E Hill St
S Shelby St
DEER PARK
Strathmoor Village
BELKNAP
Trevilian Way
Tyler Ln
Parkway Village
Pindell Ave
Hess Ln
Audubon Park
Louisville Zoo
Gardiner Ln
Goldsmith Ln
Kentucky Exposition Center
Phillips Ln
PRESTONIA
CAMP TAYLOR
Bishop Ln
Watterson Park
Henry Watterson Expy
Illinois Ave
Produce Rd
S 2nd St
BEECHMONT
STANDIFORD
Lynnview
Louisville International Airport
E Indian Trail
NEWBURG
Strawberry Ln
Crittenden Dr
Lotus Ave
Norton Ave
Loretta St
Forest Dr
Jeanine Dr
Downes Ln
HILL
Dr Martin Luther King Jr Blvd
Minors Ln
McCawley Rd
1020
65
864
ALT 60
31E
1703
264
1747

MATERIAL SUMMARY

CONTRACT ID: 152103 **056GR15P030-FD05 & FE01** **MP05600611501**

PRESTON HIGHWAY (KY 61) (OMIT MP 8.095-8.280) FROM THE NORTH END OF NORTHERN DITCH BRIDGE EXTENDING NORTH TO GERNERT COURT ASPHALT RESURFACING, A DISTANCE OF 6.13 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0001	00190	LEVELING & WEDGING PG64-22	973.00	TON
0002	01811	STANDARD CURB AND GUTTER MOD	670.00	LF
0003	01876	STANDARD HEADER CURB MOD	1,611.00	LF
0004	02006	REMOVE CONCRETE MEDIAN	650.00	LF
0005	02058	REMOVE PCC PAVEMENT	400.00	SQYD
0006	02073	JPC PAVEMENT-9 IN	400.00	SQYD
0007	02562	TEMPORARY SIGNS	1,750.00	SQFT
0008	02650	MAINTAIN & CONTROL TRAFFIC - (FD05)	1.00	LS
0009	02671	PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH
0010	02676	MOBILIZATION FOR MILL & TEXT - (FD05)	1.00	LS
0011	02677	ASPHALT PAVE MILLING & TEXTURING	17,664.00	TON
0012	02720	SIDEWALK-4 IN CONCRETE	2,041.00	SQYD
0013	02775	ARROW PANEL	4.00	EACH
0014	02782	ADJUST TRAFFIC TREADLE - (REMOVAL)	3.00	EACH
0015	03240	BASE FAILURE REPAIR	70.00	SQYD
0016	04793	CONDUIT-1 1/4 IN - (PLANNING LOOPS)	60.00	LF
0017	04793	CONDUIT-1 1/4 IN - (TRAFFIC LOOPS)	227.00	LF
0018	04795	CONDUIT-2 IN - (PLANNING LOOPS)	30.00	LF
0019	04811	ELECTRICAL JUNCTION BOX TYPE B - (TRAFFIC LOOPS)	6.00	EACH
0020	04820	TRENCHING AND BACKFILLING - (PLANNING LOOPS)	75.00	LF
0021	04820	TRENCHING AND BACKFILLING - (TRAFFIC LOOPS)	227.00	LF
0022	04829	PIEZOELECTRIC SENSOR - (PLANNING LOOPS)	12.00	EACH
0023	04830	LOOP WIRE - (PLANNING LOOPS)	4,500.00	LF
0024	04830	LOOP WIRE - (TRAFFIC LOOPS)	16,820.00	LF
0025	04895	LOOP SAW SLOT AND FILL - (PLANNING LOOPS)	1,050.00	LF
0026	04895	LOOP SAW SLOT AND FILL - (TRAFFIC LOOPS)	8,130.00	LF
0027	06510	PAVE STRIPING-TEMP PAINT-4 IN	223,200.00	LF
0028	06514	PAVE STRIPING-PERM PAINT-4 IN	111,600.00	LF
0029	06515	PAVE STRIPING-PERM PAINT-6 IN	400.00	LF
0030	06516	PAVE STRIPING-PERM PAINT-8 IN	2,000.00	LF
0031	06562	PAVE MARKING-THERMO R 6 FT	4.00	EACH
0032	06563	PAVE MARKING-R/R XBUCKS 16 IN	88.00	LF
0033	06565	PAVE MARKING-THERMO X-WALK-6 IN	8,700.00	LF
0034	06568	PAVE MARKING-THERMO STOP BAR-24IN	2,490.00	LF
0035	06569	PAVE MARKING-THERMO CROSS-HATCH	140.00	SQFT
0036	06574	PAVE MARKING-THERMO CURV ARROW	145.00	EACH
0037	06575	PAVE MARKING-THERMO COMB ARROW	5.00	EACH
0038	06576	PAVE MARKING-THERMO ONLY	9.00	EACH
0039	06589	PAVEMENT MARKER TYPE V-MW	100.00	EACH
0040	06591	PAVEMENT MARKER TYPE V-BY	1,200.00	EACH
0041	06600	REMOVE PAVEMENT MARKER TYPE V	1,200.00	EACH
0042	10020NS	FUEL ADJUSTMENT	29,009.00	DOLL

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0043	10030NS	ASPHALT ADJUSTMENT	72,862.00	DOLL
0044	20359NN	GALVANIZED STEEL CABINET - (PLANNING LOOPS)	3.00	EACH
0045	20360ES818	WOOD POST - (PLANNING LOOPS)	6.00	EACH
0046	20391NS835	ELECTRICAL JUNCTION BOX TYPE A - (PLANNING LOOPS)	3.00	EACH
0047	20997ED	REMOVE TRAFFIC ISLAND	55.00	SQYD
0048	22520EN	PAVE MARKING-THERMO YIELD BAR-36 IN	15.00	LF
0049	22664EN	WATER BLASTING EXISTING STRIPE	400.00	LF
0050	22906ES403	CL3 ASPH SURF 0.38A PG64-22	17,664.00	TON
0051	23158ES505	DETECTABLE WARNINGS - (NEW)	1,572.00	SQFT
0052	23625EC	PAVE MARK THERMO-6 IN W CAT TRAXX	200.00	LF
0053	02569	DEMOBILIZATION	1.00	LS

CONTRACT ID: 152103 **056GR15P030-FD05 & FE01** **MP05600611502**

PRESTON HIGHWAY (KY 61) (OMIT 8.095-8.280) FROM THE NORTH END OF NORTHERN DITCH BRIDGE EXTENDING NORTH TO GERNERT COURT ASPHALT RESURFACING, A DISTANCE OF 6.13 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0001	01792	ADJUST MANHOLE	7.00	EACH
0002	03425	ADJUST WATER VALVE	24.00	EACH
0003	02569	DEMOBILIZATION	1.00	LS

CONTRACT ID: 152103 **056GR15P030-FD05 & FE01** **MP05600611503**

PRESTON HIGHWAY (KY 61) (OMIT 8.095-8.280) FROM THE NORTH END OF NORTHERN DITCH BRIDGE EXTENDING NORTH TO GERNERT COURT ASPHALT RESURFACING, A DISTANCE OF 6.13 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0001	01708	RECONSTRUCT CATCH BASIN	4.00	EACH
0002	01709	ADJUST CATCH BASIN	9.00	EACH
0003	02562	TEMPORARY SIGNS	500.00	SQFT
0004	02650	MAINTAIN & CONTROL TRAFFIC - (FE01)	1.00	LS
0005	20366NN	REPLACE GRATE	2.00	EACH
0006	02569	DEMOBILIZATION	1.00	LS

JEFFERSON COUNTY
THERMOPLASTIC INTERSECTION PAVEMENT MARKINGS SUMMARY - Page 1
FD05 056 0061 004-011

MILE POINT	INTERSECTION	X-WALKS 6 INCH LF	STOP BARS 24 INCH LF	ARROWS CURVE EA	ARROWS COMB EA	"ONLY" EA	TRACKING 6 INCH LF	RAILROAD "R" 6 FT EA	RAILROAD X BUCK 16" LF	THERMO-WHITE 12 INCH LF	YIELD BAR 36" LF	NOTES
4.906	RR Crossing		74									
4.950	6901 Preston Hwy			2								TWLTL
5.000	South of Bridge		48					4	88			
5.157	6628 Preston Hwy			2								TWLTL
5.358	KY 1747 Fern Valley Rd	920	175	16			160					
5.560	6313 Preston Hwy			2								TWLTL
5.665	Shopping Center	450	105	2								
5.760	6109 Preston Hwy			2								TWLTL
5.848	Pitt Academy	150	160									
5.949	5906 Preston Hwy			2								TWLTL
6.004	Shopping Center	550	120	5	1							
6.132	Vinewood Rd	560	118	5	1							
6.256	5612 Preston Hwy			2								TWLTL
6.339	E Indian Trail	585	142	12	1							
6.490	5321 Preston Hwy			2								TWLTL
6.660	5215 S Preston Hwy			2								TWLTL
6.810	5109 Preston Hwy			2								TWLTL
6.881	Gilmore Ln/Alder Ave	510	134	11	2							
7.025	Orchard Ave	195	76	1								
7.058	4902 Preston Hwy			2								TWLTL
7.245	I-65 North Ramps	340	95	11								
7.358	Grade Lane	325	120	2			40			140		
7.454	4620 Preston Hwy			2								TWLTL
7.568	Standiford Lane	280	98	6								
7.766	Parking lot entrance			2								TWLTL
7.888	Durrett Lane	380	92	4								
8.044	BA Merchant Services			2								TWLTL
8.289	I-264 West Ramp		70								15	
TOTALS Page 1		5245	1627	101	5	0	200	4	88	140	15	

JEFFERSON COUNTY
THERMOPLASTIC INTERSECTION PAVEMENT MARKINGS SUMMARY - Page 2
FD05 056 0061 004-011

MILE POINT	INTERSECTION	X-WALKS 6 INCH LF	STOP BARS 24 INCH LF	ARROWS CURVE EA	ARROWS COMB EA	"ONLY" EA	TRACKING 6 INCH LF	RAILROAD 'R" 6 FOOT EA	RAILROAD CROSS BUCK 16 LF	CROSS HATCH 12 INCH SQFT	YIELD BAR 36" LF	NOTES
8.350	La Quinta Inn			2								TWLTL
8.490	4021 Preston Hwy			2								TWLTL
8.540	Belmar Drive	430	115	3								
8.650	Between Wolfe & Bourbon			2								TWLTL
8.768	Phillips Lane	280	76	5								
8.879	Sleep Inn			2								TWLTL
9.177	Audubon Pkwy	200	68									
9.332	Hess Lane	445	102	3								
9.400	3021 Preston Hwy			2								TWLTL
9.476	Locust Lane	600	96	2								
9.957	Clarks Lane	440	86	4		2						
10.107	US 60A Eastern Pkwy	360	80	4		2						
10.346	Keswick/S Shelby St/Lynn St		32	2		1						
10.455	S Preston/Lynn St		30	4		2						
10.639	E Brandeis	330	86									
10.128	US 60A Eastern Pkwy	370	80	3								
10.652	E Brandeis at S Preston St			4		2						
10.942	E Brandeis at Arthur St		12									
TOTALS Page 2		3455	863	44	0	9	0	0	0	0	0	
PROJECT TOTALS		8700	2490	145	5	9	200	4	88	140	15	

Jefferson County
FD05 056 0061 004-011
KY 61 - Preston Hwy/St. - Shelby St. - Lynn St. - Brandeis Ave

Sidewalk Ramp and Detectable Warning Summary - Page 1

Intersection	Mile Point	Ramp Location	Ramp Type	4" Sidewalk SQYD	Header Curb LF	Curb & Gutter LF	Detectable Warning SQFT
Fern Valley Road	**5.358**	SE	1	20.00	-	18.00	18.00
		SW	3	10.00	-	20.00	24.00
Auto Zone	**5.667**	SE	3	14.00	-	-	24.00
		NE	2 x 1's	17.00	-	-	20.00
		SW	1	37.00	-	-	8.00
		NNW	3	11.00	20.00	-	14.00
		NW	3	6.00	10.00	-	10.00
Forrest Drive	**5.725**	SE	1	19.00	20.00	-	8.00
		NE	1	10.00	15.00	-	8.00
Prestwood Drive	**5.799**	SE	1	14.00	25.00	-	8.00
Fazoli's	**5.900**	SE	1	10.00	14.00	-	8.00
		NE	1	9.00	10.00	-	8.00
		ISLAND	1	10.00	16.00	-	16.00
Indian Trail Square	**6.000**	SE	3	23.00	-	-	24.00
		NE	3	12.00	10.00	-	8.00
		S ISLAND	-	5.00	16.00	-	-
		N ISLAND	-	7.00	20.00	-	-
		SW	3	11.00	-	-	24.00
		NW	1	6.00	-	-	14.00
Indian Trail	**6.339**	SE#	3	11.00	-	50.00	10.00
		NE	3	22.00	-	22.00	20.00
		SW	3	21.00	25.00	-	30.00
		NW	3	19.00	25.00	-	30.00
TOTALS PAGE 1				**324.00**	**226.00**	**110.00**	**334.00**

Jefferson County
FD05-056-0061-004-011
KY 61 - Preston Hwy/St. - Shelby St. - Lynn St. - Brandeis Ave

Sidewalk Ramp and Detectable Warning Summary - Page 2

Intersection	Mile Point	Ramp Location	Ramp Type	4" Sidewalk SQYD	Header Curb LF	Curb & Gutter LF	Detectable Warning SQFT
Krupp Park Drive	**6.467**	SE*	1	14.00	-	10.00	10.00
Gilmore Lane	**6.881**	NE	2 x 1's	23.00	-	40.00	20.00
		SE*#	3	15.00	-	50.00	12.00
		SW*#	3	17.00	-	-	24.00
		NW*	3	20.00	-	30.00	28.00
Rose Street	**6.962**	NW	1	13.00	-	-	8.00
		SW	1	8.00	-	-	8.00
Pigeon Pass Road	**6.990**	SE	1	14.00	-	10.00	10.00
		NE	1	10.00	-	20.00	8.00
Orchard Avenue	**7.025**	NW	1	10.00	-	20.00	10.00
		SW	3	29.00	-	-	20.00
		SE	2	15.00	-	12.00	10.00
Meadow Street	**7.093**	NW	1	14.00	-	-	8.00
		SW	1	12.00	-	-	8.00
I-65 NB Exit Ramp	**7.245**	NE	2	14.00	-	20.00	10.00
		NW	1	17.00	-	-	10.00
		N ISLAND	2 x 1's & 1 x 2's	34.00	-	20.00	30.00
		SW#	1	39.00	50.00	-	10.00
Grade Lane	**7.358**	NW*	2 x 2's	20.00	50.00	-	20.00
		NE	2	17.00	25.00	-	10.00
		SW#	2	39.00	40.00	-	10.00
TOTALS PAGE 2				**394.00**	**165.00**	**232.00**	**284.00**

Jefferson County
FD05-056-0061-004-011
KY 61 - Preston Hwy/St. - Shelby St. - Lynn St. - Brandeis Ave

Sidewalk Ramp and Detectable Warning Summary - Page 3

Intersection	Mile Point	Ramp Location	Ramp Type	4" Sidewalk SQYD	Header Curb LF	Curb & Gutter LF	Detectable Warning SQFT
Evergreen Cemetary Entrance	**7.414**	SE	1	16.00	8.00	-	10.00
		NE	1	13.00	6.00	-	10.00
Standiford Lane	**7.568**	SW*	1	20.00	-	30.00	10.00
		NW	3	30.00	-	40.00	20.00
		NE	2 x 1's	20.00	-	25.00	20.00
		SE	1	14.00	-	15.00	8.00
Male High School Entrance	**7.675**	SE	1	14.00	20.00	-	10.00
		NE	1	14.00	20.00	-	10.00
Durrett Lane	**7.888**	NE	1	14.00	25.00	-	10.00
		SW	2	12.00	16.00	-	10.00
I-264 WB Exit Ramp	**8.289**	NE	1	12.00	-	13.00	14.00
		ISLAND	2 x 1's	24.00	-	25.00	22.00
		SE	1	14.00	-	12.00	8.00
Briden Avenue	**8.394**	NW	1	15.00	-	-	8.00
		SW	1	19.00	-	-	10.00
Morgan Avenue	**8.410**	SE	1	12.00	-	-	8.00
		NE	1	24.00	-	15.00	8.00
Keller Avenue	**8.460**	NW	1	8.00	-	-	8.00
		SW	1	9.00	-	-	8.00
Short Street	**8.469**	SE	1	24.00	-	18.00	8.00
		NE	1	9.00	-	-	8.00
TOTALS PAGE 3				**337.00**	**95.00**	**193.00**	**228.00**

Jefferson County
FD05-056-0061-004-011
KY 61 - Preston Hwy/St. - Shelby St. - Lynn St. - Brandeis Ave

Sidewalk Ramp and Detectable Warning Summary - Page 4

Intersection	Mile Point	Ramp Location	Ramp Type	4" Sidewalk SQYD	Header Curb LF	Curb & Gutter LF	Detectable Warning SQFT
Belmar Drive	**8.540**	SE	3	24.00	-	-	16.00
		NE	3	9.00	-	-	16.00
		SW	3	8.00	-	-	8.00
		NW	3	7.00	-	-	8.00
Bourbon Avenue	**8.606**	SE	1	14.00	15.00	-	8.00
		NE	1	6.00	15.00	-	8.00
Wolfe Avenue	**8.672**	SE	1	12.00	15.00	-	8.00
		NE	1	8.00	15.00	-	8.00
Larue Avenue	**8.737**	SE	1	13.00	15.00	-	8.00
		NE	1	12.00	15.00	-	10.00
Phillips Lane	**8.768**	SE	2	14.00	20.00	-	10.00
		NW	2	20.00	25.00	-	20.00
		SW#	3	12.00	20.00	-	18.00
Manning Road	**8.821**	NW	1	10.00	15.00	-	8.00
		SW	1	10.00	20.00	-	8.00
Union Avenue	**8.835**	SE	1	15.00	15.00	-	10.00
		NE	1	10.00	15.00	-	10.00
Hart Avenue	**8.903**	SE	1	10.00	15.00	-	8.00
		NE	1	14.00	15.00	-	8.00
KFEC Gate 6	**8.903**	NW	1	25.00	25.00	-	10.00
		SW	1	9.00	20.00	-	10.00
TOTALS PAGE 4				**262.00**	**295.00**	**0.00**	**218.00**

Jefferson County
FD05-056-0061-004-011
KY 61 - Preston Hwy/St. - Shelby St. - Lynn St. - Brandeis Ave

Sidewalk Ramp and Detectable Warning Summary - Page 5

Intersection	Mile Point	Ramp Location	Ramp Type	4" Sidewalk SQYD	Header Curb LF	Curb & Gutter LF	Detectable Warning SQFT
Hess Lane	**9.332**	SE	3	18.00	-	24.00	20.00
		SW	3	12.00	15.00	-	18.00
		NW	3	13.00	18.00	-	16.00
Jefferson Court	**9.383**	NW	1	14.00	20.00	-	8.00
		SW	1	10.00	25.00	-	8.00
Packard Avenue	**9.591**	NE	1	10.00	-	24.00	10.00
Perennial Drive	**9.651**	SE	1	12.00	-	20.00	10.00
		NE	1	12.00	-	15.00	10.00
Reading Road	**9.836**	SE	1	14.00	-	22.00	10.00
		NE	1	14.00	-	20.00	10.00
Clarks Lane (Rally's Entrance)	**9.957**	SW	3	18.00	-	10.00	10.00
		NW	3	16.00	12.00	-	10.00
Shelby St. & Fetter Avenue	**10.178**	SE	1	12.00	22.00	-	10.00
		NE	1	20.00	25.00	-	10.00
		SW	1	10.00	18.00	-	8.00
		NW	1	24.00	30.00	-	10.00
Preston St. & Fetter Avenue	**10.198**	SE	1	14.00	18.00	-	10.00
		NE	1	20.00	20.00	-	10.00
Preston St. & Presidents Boulevard	**10.198**	NW	1	14.00	20.00	-	8.00
		SW	1	12.00	18.00	-	10.00
		ISLAND	1	8.00	15.00	-	8.00
		ISLAND	1	8.00	15.00	-	8.00
TOTALS PAGE 5				**305.00**	**291.00**	**135.00**	**232.00**

Jefferson County
FD05-056-0061-004-011
KY 61 - Preston Hwy/St. - Shelby St. - Lynn St. - Brandeis Ave

Sidewalk Ramp and Detectable Warning Summary - Page 6

Intersection	Mile Point	Ramp Location	Ramp Type	4" Sidewalk SQYD	Header Curb LF	Curb & Gutter LF	Detectable Warning SQFT
Shelby St. & Texas Avenue	**10.280**	SE	1	16.00	16.00	-	8.00
		NE	1	15.00	15.00	-	8.00
Preston St. & Atwood Street	**10.328**	NW	1	14.00	25.00	-	10.00
		SW	1	10.00	20.00	-	10.00
Shelby St. & Keswick Boulevard	**10.346**	SE	1	17.00	20.00	-	10.00
		NE	1	18.00	18.00	-	10.00
		SW	1	24.00	30.00	-	10.00
		NW	1	14.00	12.00	-	10.00
Preston St. & Lynn Street	**10.468**	NE	1	20.00	25.00	-	10.00
		NW	1	16.00	20.00	-	10.00
		SW	1	18.00	25.00	-	10.00
Preston St. & Barbee Avenue	**10.568**	NW	1	20.00	20.00	-	10.00
		SW	1	10.00	15.00	-	10.00
Preston St. & Brandeis Avenue	**10.639**	SE	3	16.00	22.00	-	20.00
		NE	1	14.00	20.00	-	8.00
		NNE	2	10.00	15.00	-	8.00
		NW	3	26.00	25.00	-	22.00
		SW	1	14.00	20.00	-	10.00
		SSW	2	8.00	15.00	-	8.00
TOTALS PAGE 6				**300.00**	**378.00**	**0.00**	**202.00**

Jefferson County
FD05-056-0061-004-011
KY 61 - Preston Hwy/St. - Shelby St. - Lynn St. - Brandeis Ave

Sidewalk Ramp and Detectable Warning Summary - Page 7

Intersection	Mile Point	Ramp Location	Ramp Type	4" Sidewalk SQYD	Header Curb LF	Curb & Gutter LF	Detectable Warning SQFT
Preston St. & Rawlings Street	**10.718**	SE	1	10.00	15.00	-	10.00
		NE	1	14.00	16.00	-	10.00
Preston St. & Augustus Avenue	**10.796**	SE	1	10.00	15.00	-	8.00
		NE	1	16.00	20.00	-	10.00
Preston St. & E Lee Street	**10.853**	SE	1	15.00	25.00	-	8.00
		NE	1	18.00	25.00	-	8.00
Preston St. & I-65 NB Entrance Ramp	**10.963**	NW	1	16.00	15.00	-	10.00
		SW	1	20.00	30.00	-	10.00
TOTALS PAGE 7				**119.00**	**161.00**	**0.00**	**74.00**
PROJECT TOTALS				**2,041.00**	**1,611.00**	**670.00**	**1,572.00**

* Denotes that the alignment of the new sidewalk ramp may be different than the existing. Therefore a quanity of sidewalk removal and resotration will be necessary but will be considered incidential to the bid item for 4" concrete sidewalk.

# Denotes potential need for sidewalk thicker than 4” and/or modification to the existing curb alignment that could create the need for Class A mass concrete. See Special Note for Construction of Sidewalk Ramps.

Traffic Loops Summary
Jefferson County
FD05 056 0061 004-011

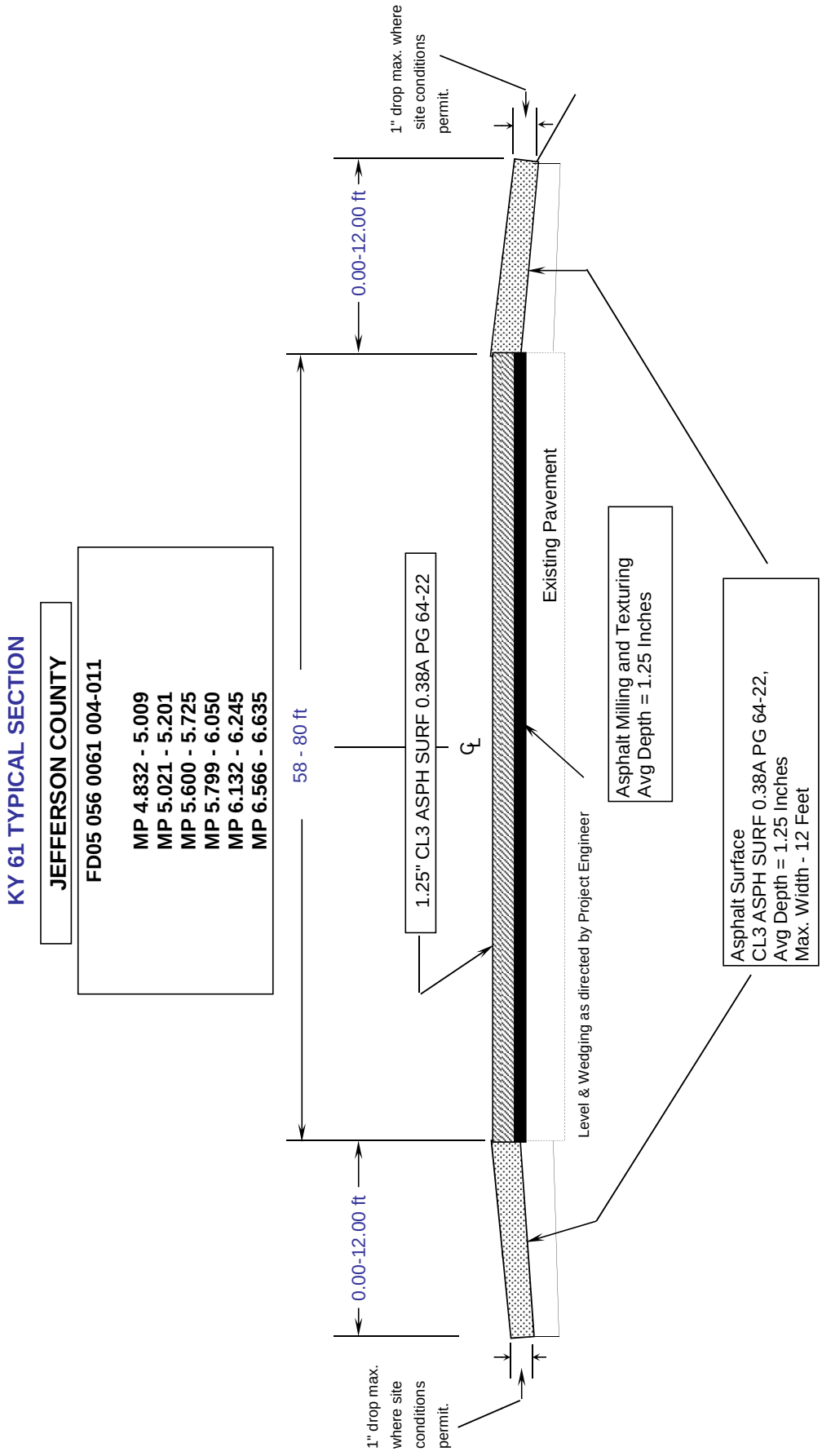
# Loops	Mile Point	Intersection	Approaches	Loop Wire LF	Saw Slot & Fill LF	Conduit 1 1/4 Inch LF	Trench & Backfill LF	Junction Box Type-B EACH
4	5.358	KY 1747 - Fern Valley Rd	2-NB Lt, 2-SB Lt	1,220	665			
5	5.665	Aaron's/Auto Zone	1-NB Lt, 1-SB Lt, 1-EB, 2-WB	1,390	660	20	20	
4	6.004	Indian Trail Square	1-NB Lt, 1-SB Lt, 2-WB	1,195	590	15	15	
6	6.132	Vinewood Rd	1-NB Lt, 1-SB Lt, 2-EB, 2-WB	1,520	770	20	20	
4	6.339	E Indian Trail	1-NB Lt, 1-SB Lt, 2-WB	1,090	535	10	10	1
6	6.881	Gilmore Lane	1-NB Lt, 1-SB Lt, 2-EB, 2-WB	1,560	780	30	30	2
1	7.025	Orchard Ave	1-EB	260	125	10	10	1
1	7.245	I-65 North Ramps	1-NB Lt	320	145	12	12	1
1	7.358	Grade Lane	1-NB Lt	320	145	25	25	
3	7.568	Standiford Lane	1-EB, 2-WB	740	365	30	30	
1	7.888	Durrett Lane	1-SB Lt	320	145			
3	8.54	Belmar Lane	1-NB Lt, 1-SB Lt, 1-WB	890	410	15	15	1
2	8.768	Phillips Lane	1-NB Lt, 1-EB	580	260	10	10	
3	9.332	Hess Lane	1-NB Lt, 1-SB Lt, 1-WB	890	410	10	10	
3	9.476	Locust Lane	1-NB Lt, 1-SB Lt, 1-EB	920	425			
2	9.957	Clarks Lane	2-WB	490	250			
8	10.107	US 60 A - Eastern Pkwy	4-NB, 4-SB	2,225	1,040	20	20	
3	10.652	Brandeis Ave	2-EB, 1-WB	890	410			
60	**TOTALS**			**16,820**	**8,130**	**227**	**227**	**6**

Drainage Summary
Jefferson County
FD05 056 0061 004-011

MILE POINT	DIRECTION	APPROXIMATE LOCATION	ADJUST CBI EACH	RECONSTRUCT CBI EACH	ADJUST MANHOLE EACH	REPLACE GRATE EACH	NOTES
5.358	Southbound	Fern Valley Rd, SW corner	1				
6.336	Northbound	E Indian Trail, SE corner		1			Remove hood & create road worthy inlet
6.340	Northbound	E Indian Trail, NE corner	1			1	Replace grate with pedstrian grate
7.291	Northbound	Across from Waffle House		1			
7.361	Northbound	Grade Lane		1			
7.428	Northbound	Evergreen Cemetery	1				
7.890	Northbound	Durrett Lane			1		
8.667	Southbound	Value City	1				
8.768	Southbound	Phillips Lane, SW corner		1			Remove lid & create road worthy inlet
9.969	Southbound	Just south of Clarks Ln (Rally's)	1				
10.073	Southbound	Centerline at Napa			1		
10.214	Northbound	2233 S Shelby St	1				
10.298	Southbound	South of Atwood, Rt. Side	1				
10.304	Southbound	South of Atwood, Rt. Side	1				
10.462	Northbound	Preston St & Lynn St			1		
10.573	Northbound	Barbee Way	1			1	Replace frame and grate
10.819	Centerline	North of Augustus			1		
10.841	Centerline	South of E Lee St			1		
10.863	Southbound	407 Brandeis Ave			1		
10.879	Southbound	Brandeis Ave & Bradley Ave			1		
TOTALS			**9**	**4**	**7**	**2**	

Base Failure Repair Summary
Jefferson County
FD05 056 0061 004-011

MILE POINT	DIRECTION	APPROXIMATE LOCATION	APPOXIMATE DIMENSIONS	APPROXIMATE AREA SQYD
8.573	Southbound	Lane 2 (curb lane) at Aldis	30' x 8'	30
10.347	Southbound	Lane 2 (right & parking ln) north of Atwood St.	18' x 20'	40
			TOTAL	**70**

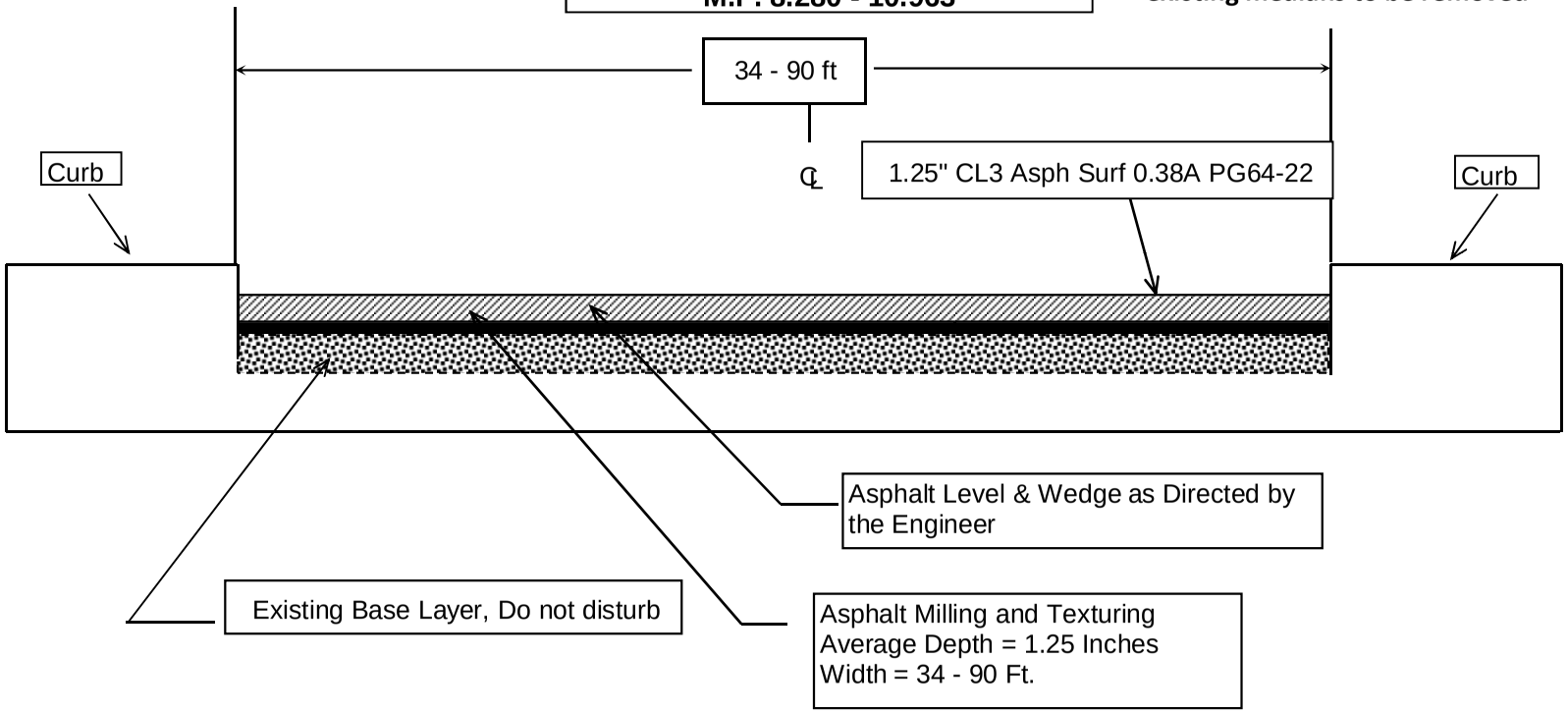

KY 61 TYPICAL SECTION
JEFFERSON COUNTY
FD05 056 0061 004-011
MP 4.832 - 5.009
MP 5.021 - 5.201
MP 5.600 - 5.725
MP 5.799 - 6.050
MP 6.132 - 6.245
MP 6.566 - 6.635
1" drop max. where site conditions permit.
0.00-12.00 ft
58 - 80 ft
1.25" CL3 ASPH SURF 0.38A PG 64-22
℄
Existing Pavement
Asphalt Milling and Texturing
Avg Depth = 1.25 Inches
Level & Wedging as directed by Project Engineer
Asphalt Surface
CL3 ASPH SURF 0.38A PG 64-22,
Avg Depth = 1.25 Inches
Max. Width - 12 Feet
0.00-12.00 ft
1" drop max. where site conditions permit.

TYPICAL SECTION

JEFFERSON COUNTY

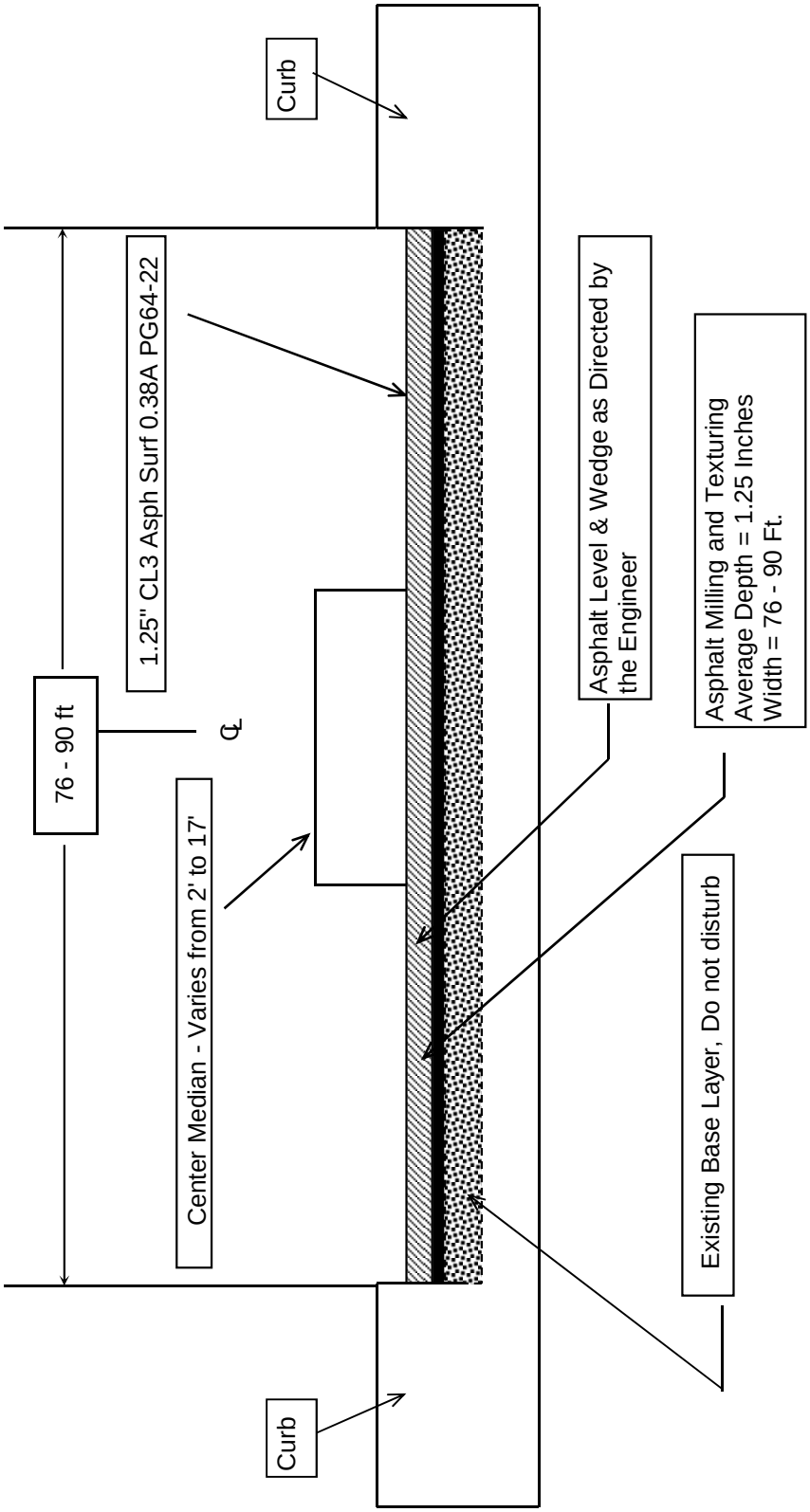
FD05 056 0061 004-011

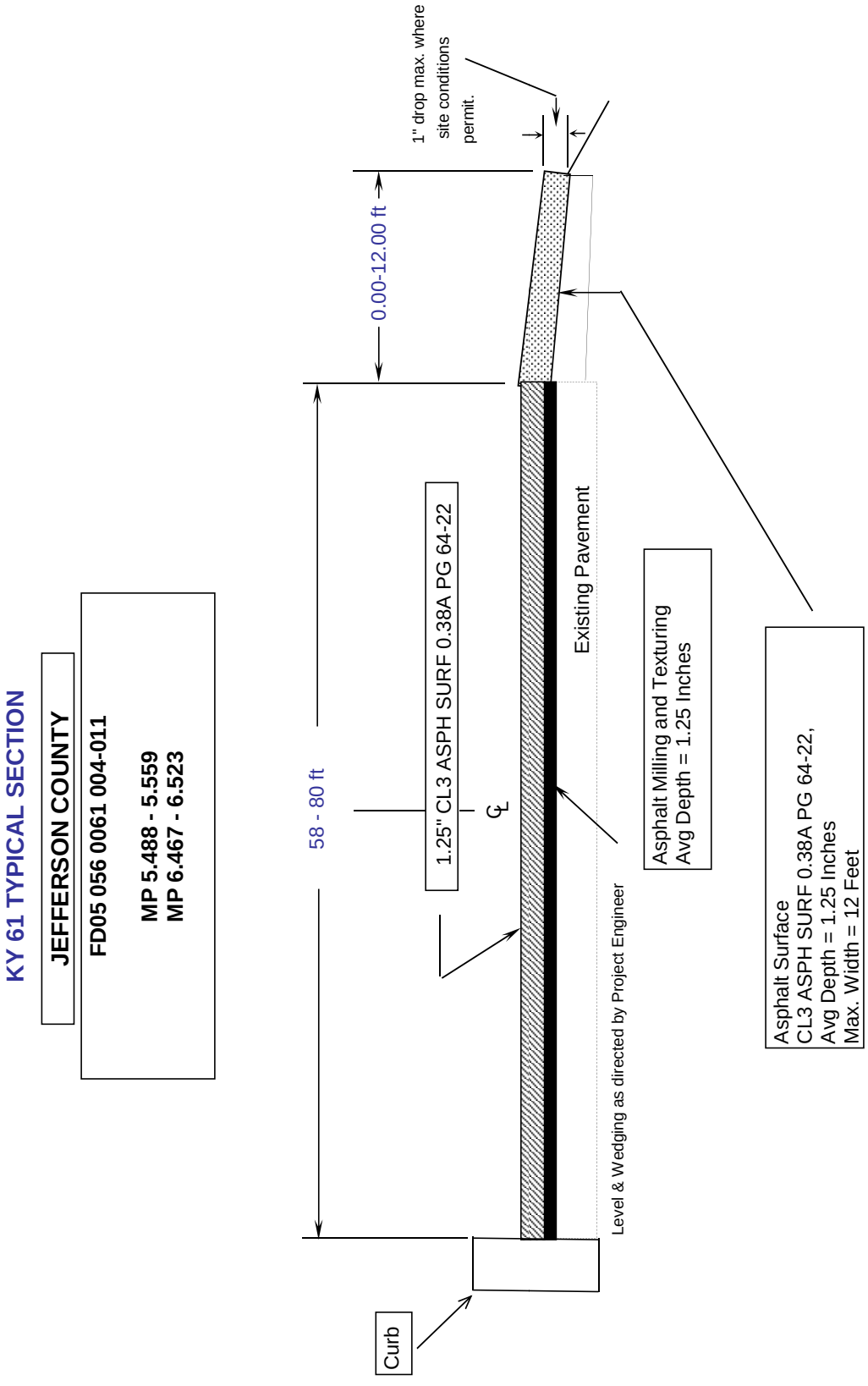
M.P. 5.009 - 5.021
M.P. 5.460 - 5.488
M.P. 5.559 - 5.571
M.P. 5.725 - 5.799
M.P. 6.050 - 6.132
M.P. 6.245 - 6.467
M.P. 6.523 - 6.566
M.P. 6.635 - 6.709
M.P. 6.881 - 8.095
M.P. 8.280 - 10.963 — ***existing medians to be removed**

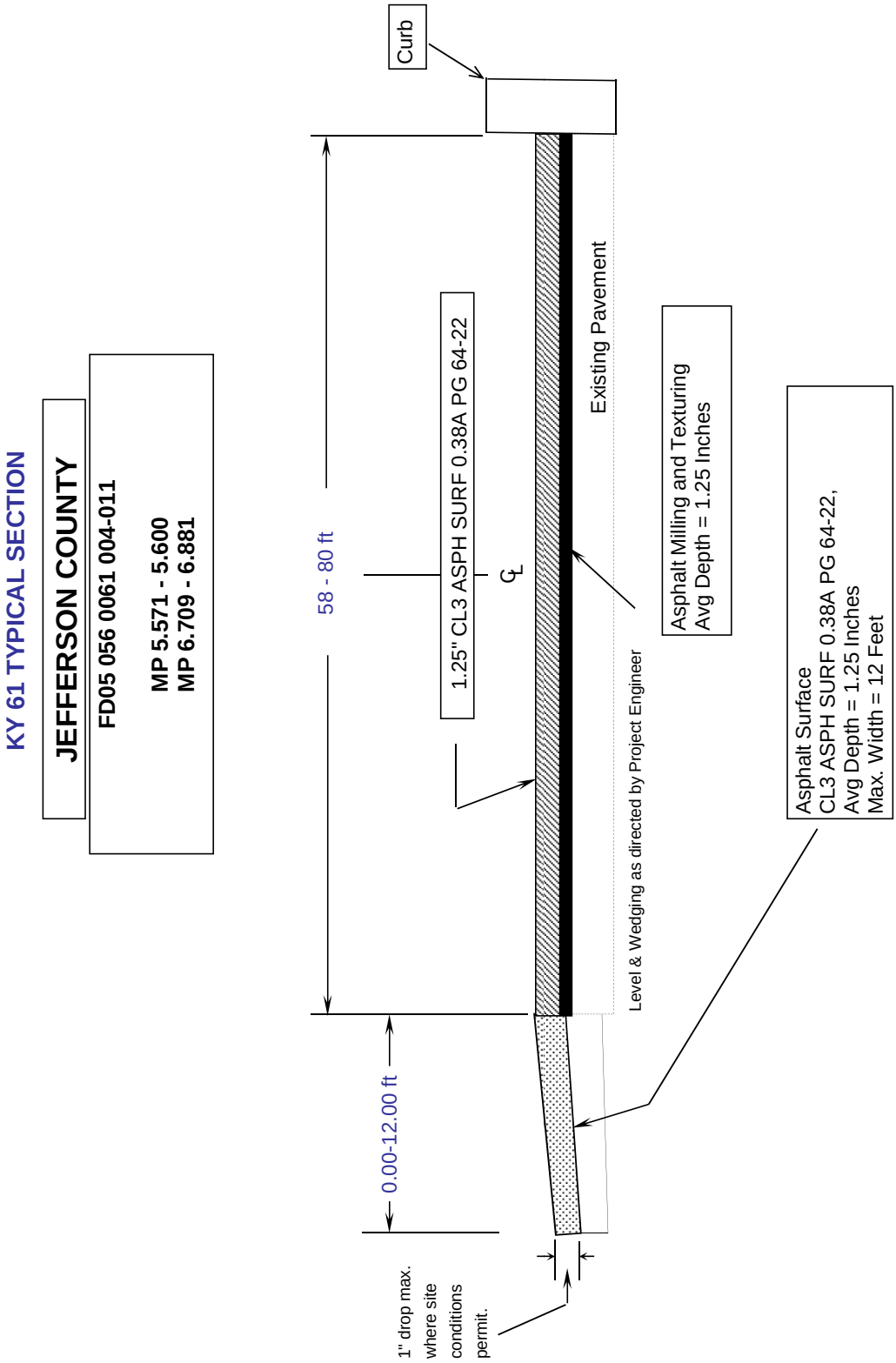


TYPICAL SECTION

JEFFERSON COUNTY
FD05 056 0061 004-011
MP 5.201 - 5.460




KY 61 TYPICAL SECTION
JEFFERSON COUNTY
FD05 056 0061 004-011
MP 5.488 - 5.559
MP 6.467 - 6.523
1" drop max. where site conditions permit.
0.00-12.00 ft
58 - 80 ft
1.25" CL3 ASPH SURF 0.38A PG 64-22
℄
Existing Pavement
Asphalt Milling and Texturing
Avg Depth = 1.25 Inches
Asphalt Surface
CL3 ASPH SURF 0.38A PG 64-22,
Avg Depth = 1.25 Inches
Max. Width = 12 Feet
Level & Wedging as directed by Project Engineer
Curb


KY 61 TYPICAL SECTION
JEFFERSON COUNTY
FD05 056 0061 004-011
MP 5.571 - 5.600
MP 6.709 - 6.881
Curb
58 - 80 ft
1.25" CL3 ASPH SURF 0.38A PG 64-22
℄
Existing Pavement
Asphalt Milling and Texturing
Avg Depth = 1.25 Inches
Level & Wedging as directed by Project Engineer
Asphalt Surface
CL3 ASPH SURF 0.38A PG 64-22,
Avg Depth = 1.25 Inches
Max. Width = 12 Feet
0.00-12.00 ft
1" drop max.
where site
conditions
permit.

KY 61 (Preston Hwy) at RR Crossing

Install RR advance warning markings 175ft in advance, and stop bars approx. 8ft in advance of crossing gates.

Figure 8B-6. Example of Placement of Warning Signs and Pavement Markings at Grade Crossings

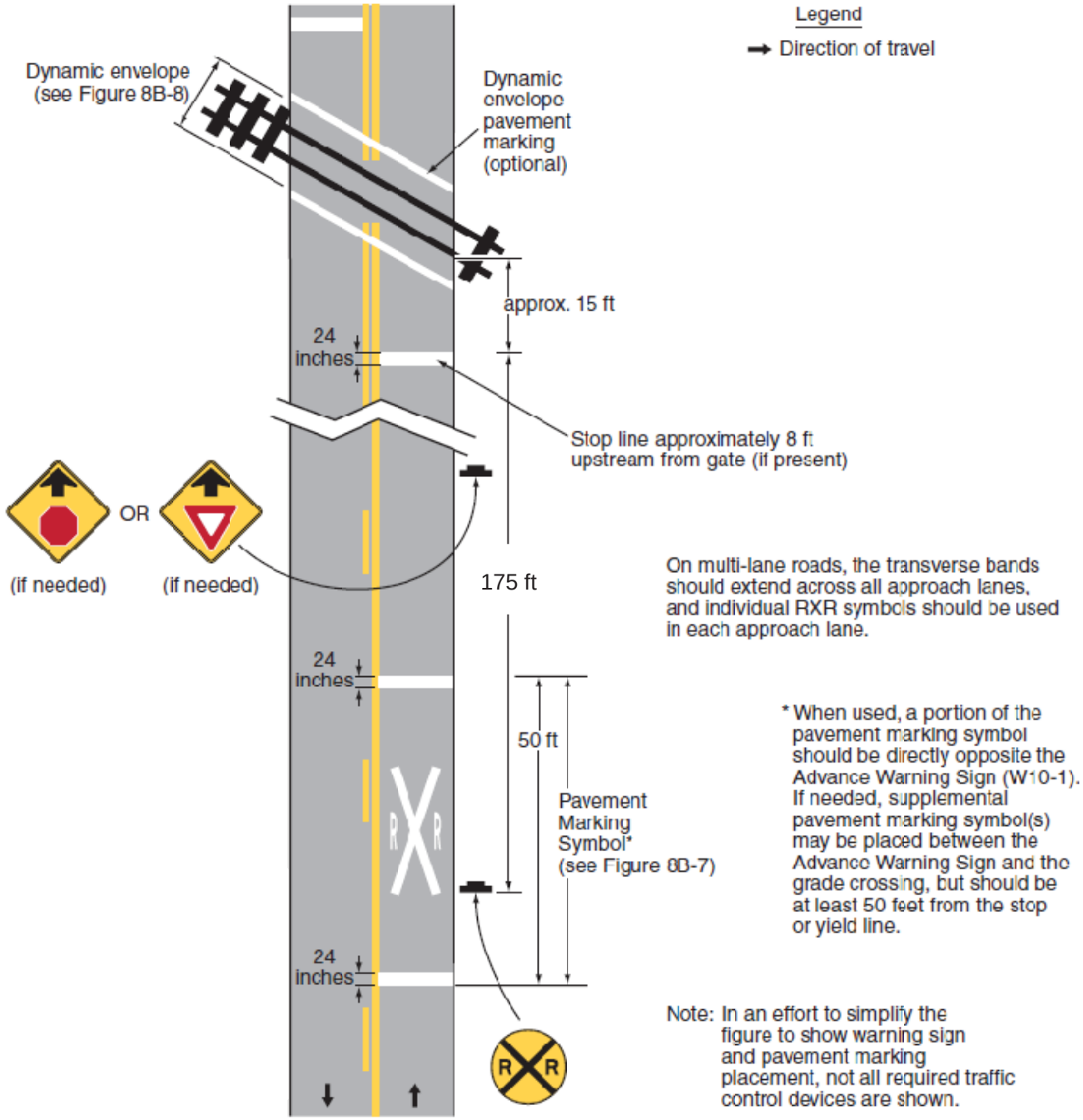
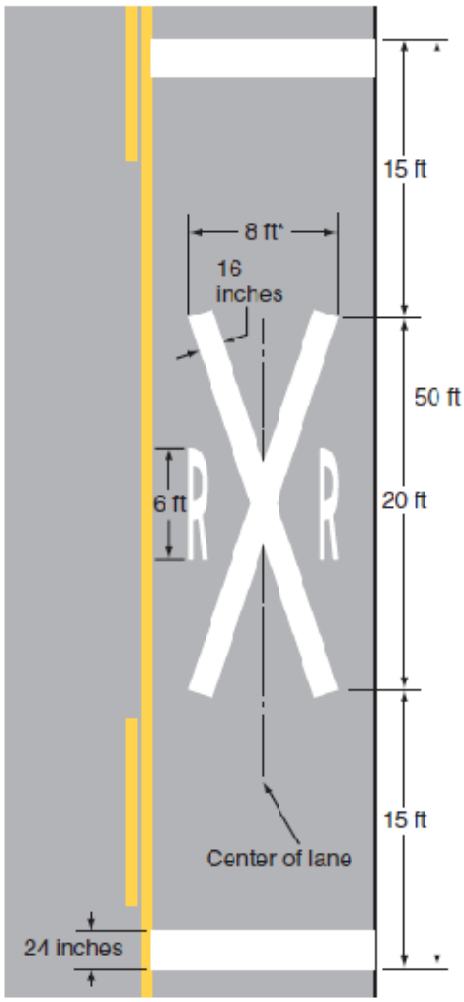


Figure 8B-7. Grade Crossing Pavement Markings

A - Grade crossing pavement marking symbol



*Width may vary according to lane width

Note: Refer to Figure 8B-6 for placement

KY 61 Southbound, South of Fern Valley

Install approx. 990 LF of 4” white dotted lane line.

Begin edge line taper at the Sam’s Entrance extending 450 ft to the south.

KY 61 @ Indian Trail

Add 100ft bay taper and create gap for NB right turn lane.

KY 61 at Gilmore Ln

Add 100ft bay taper and edge line for NB right turn lane.

Eliminate existing “ONLY” pavement markings in NB right turn lane.

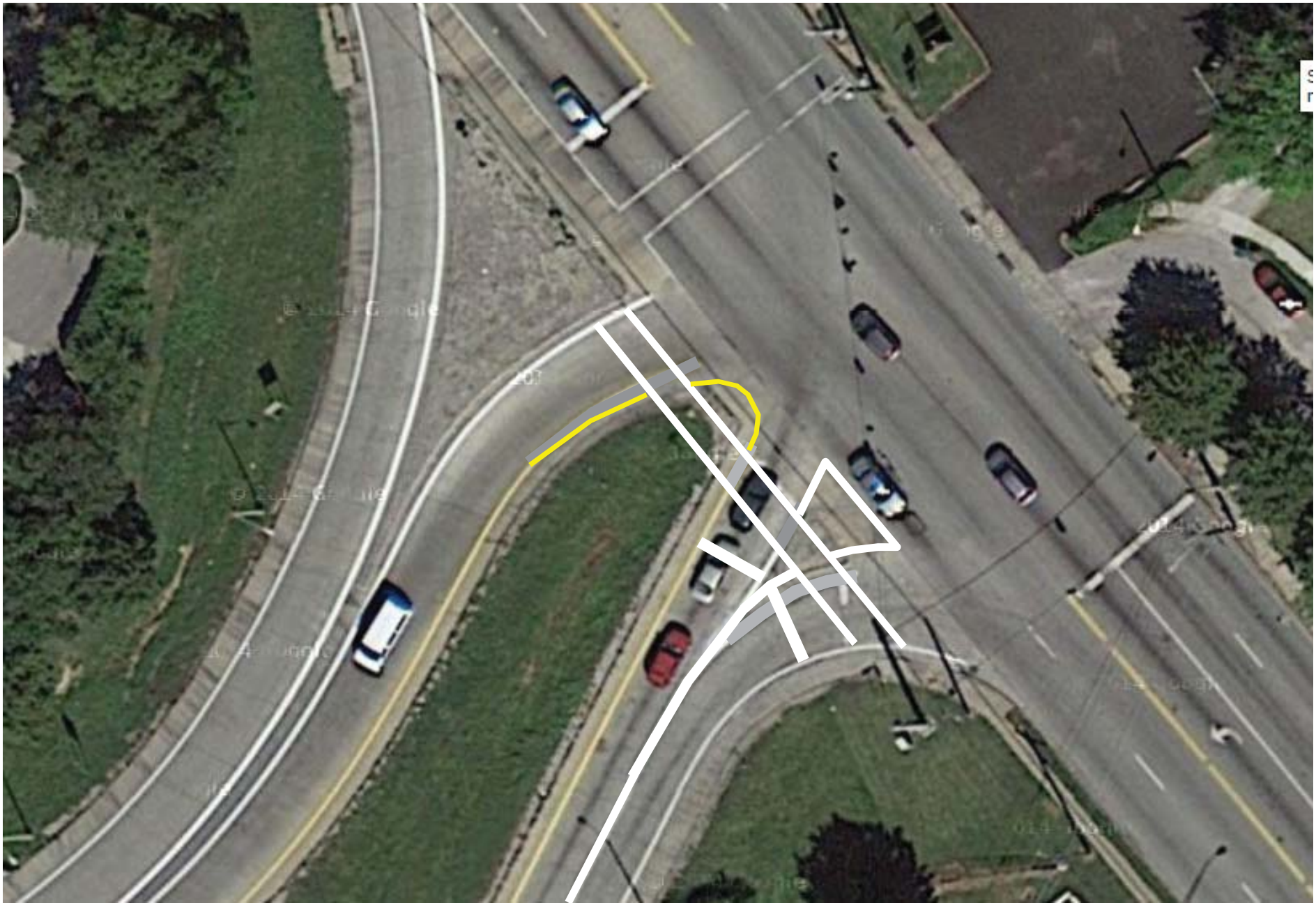
Extend stop bar across NB right turn lane.

KY 61 at I-65 Ramps

Install new 6” thermo crosswalk lines

Install new 8” solid white flush island

Remove any existing pavement markings that conflict with the new striping



KY 61 at I-65 Ramps

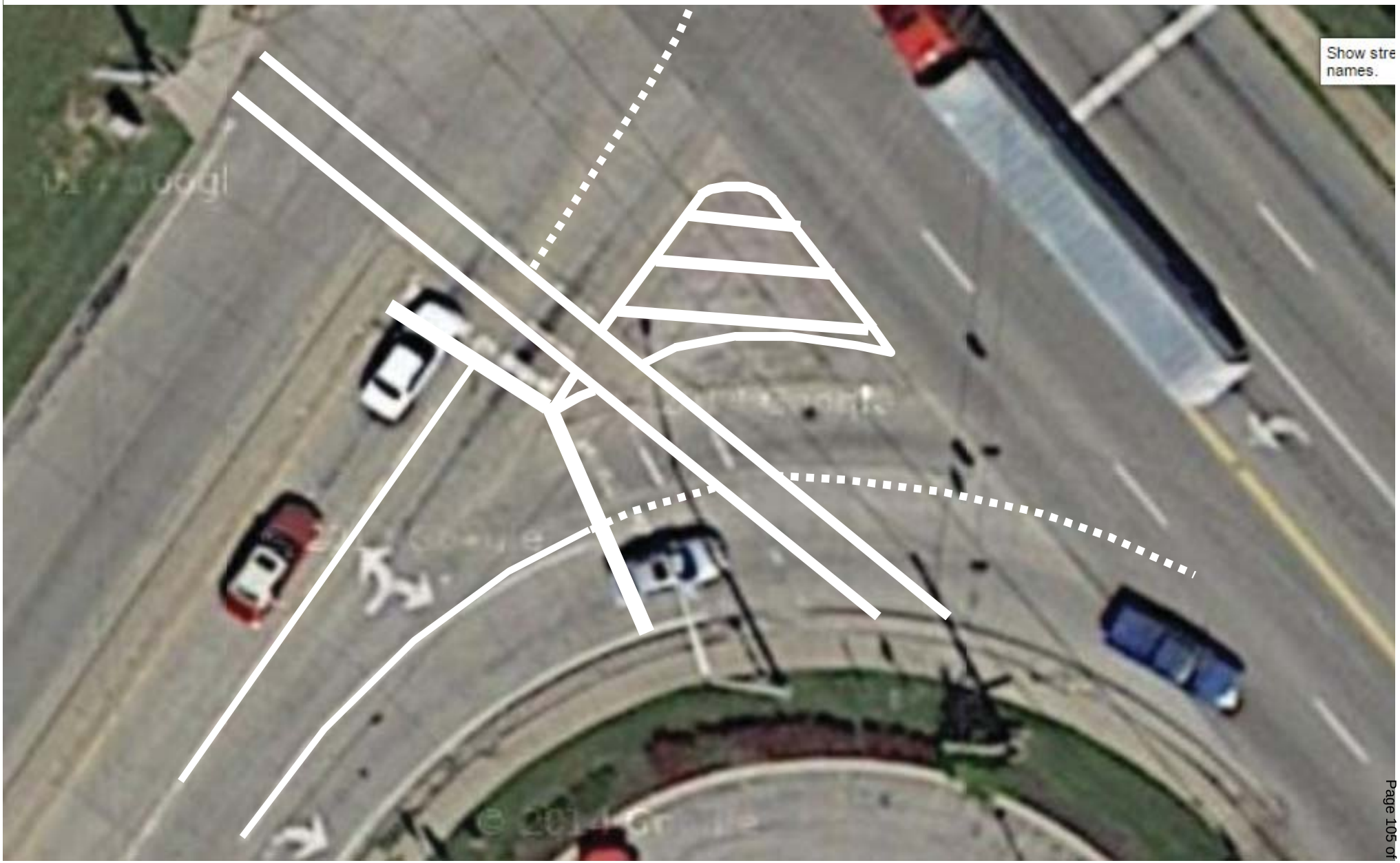
Create SB left turn lane with 75ft storage, 100ft bay.

Extend stop bar across new left turn lane and add left turn arrows.

Add 3 left, 3 right turn arrows and a solid 6” solid white over the existing skips.

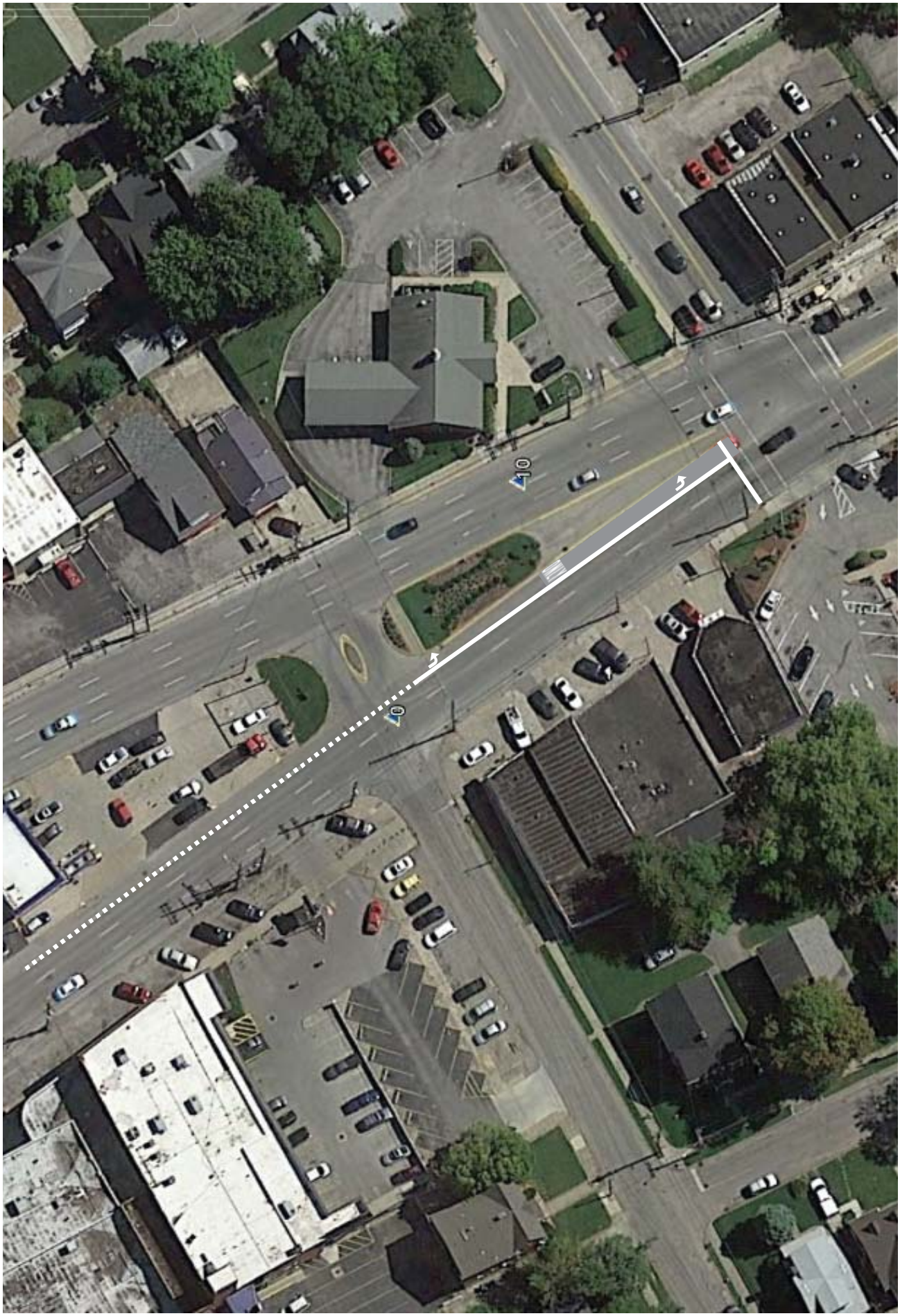
KY 61 at Grade Lane

Install new 8” solid white flush island.
Install new 12” white thermo cross hatching.
Install 6” thermo dual turn tracking (3’ skip with 9’ gap).
Remove any existing pavement markings that conflict with the new striping.



KY 61 at Clarks Ln

Add approx. 190ft of 8” solid white line
Add approx. 240ft of 8” dotted white line
Install left turn arrows and “ONLY” pavement markings as shown.

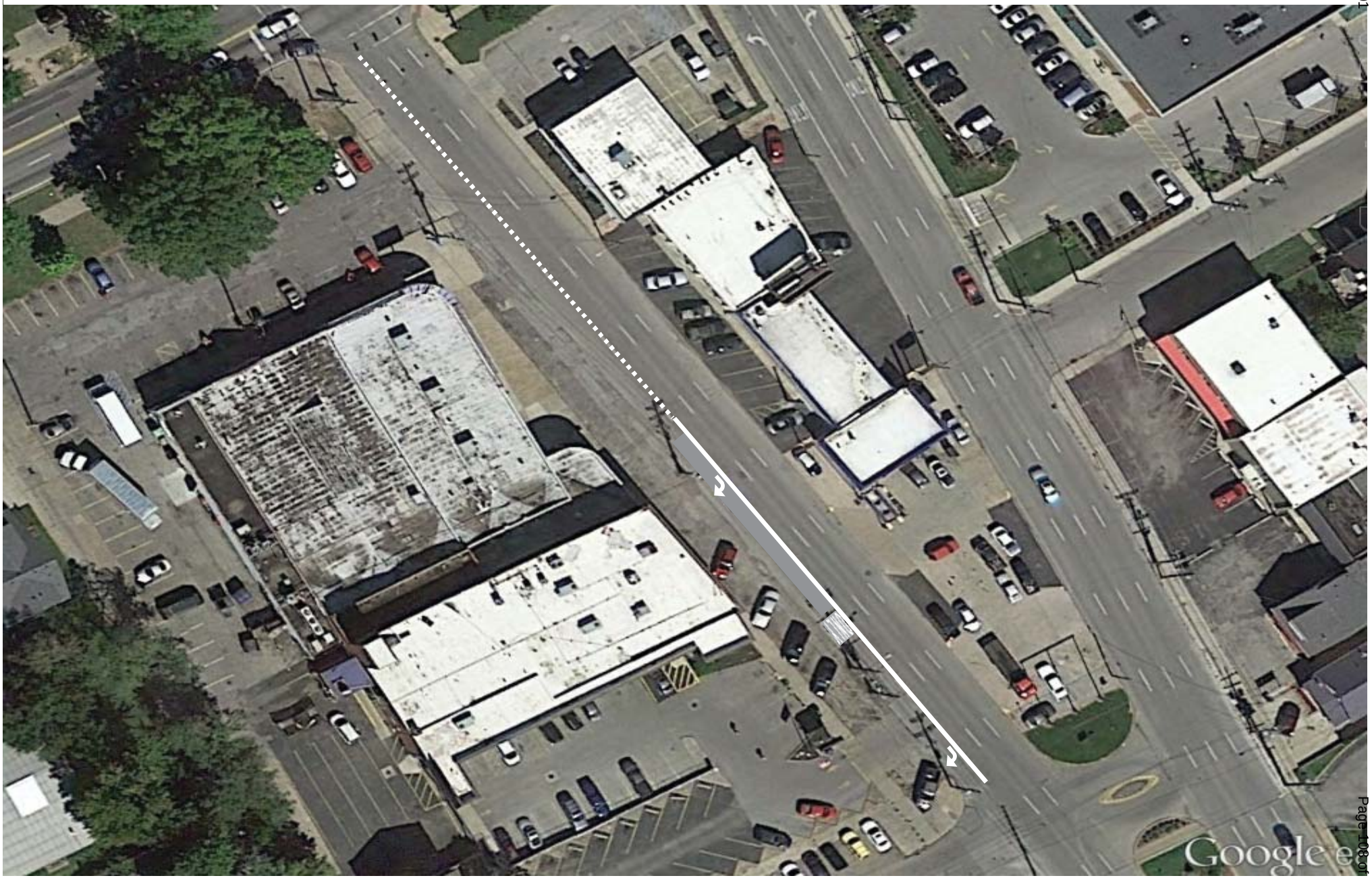


KY 61 (S Shelby St) at Eastern Pkwy

Add approx. 320ft (two 160ft lines) of 8” solid white line.
Add approx. 460ft (two 230ft lines) of 8” dotted white line.
Install left and right turn arrows and “ONLY” pavement markings as shown.

KY 61 (S Preston St) at Harrison Pl

Add approx. 2250ft (two 160ft lines) of 8” solid white line.
Add approx. 210ft (two 230ft lines) of 8” dotted white line.
Install right turn arrows and “ONLY” pavement markings as shown.



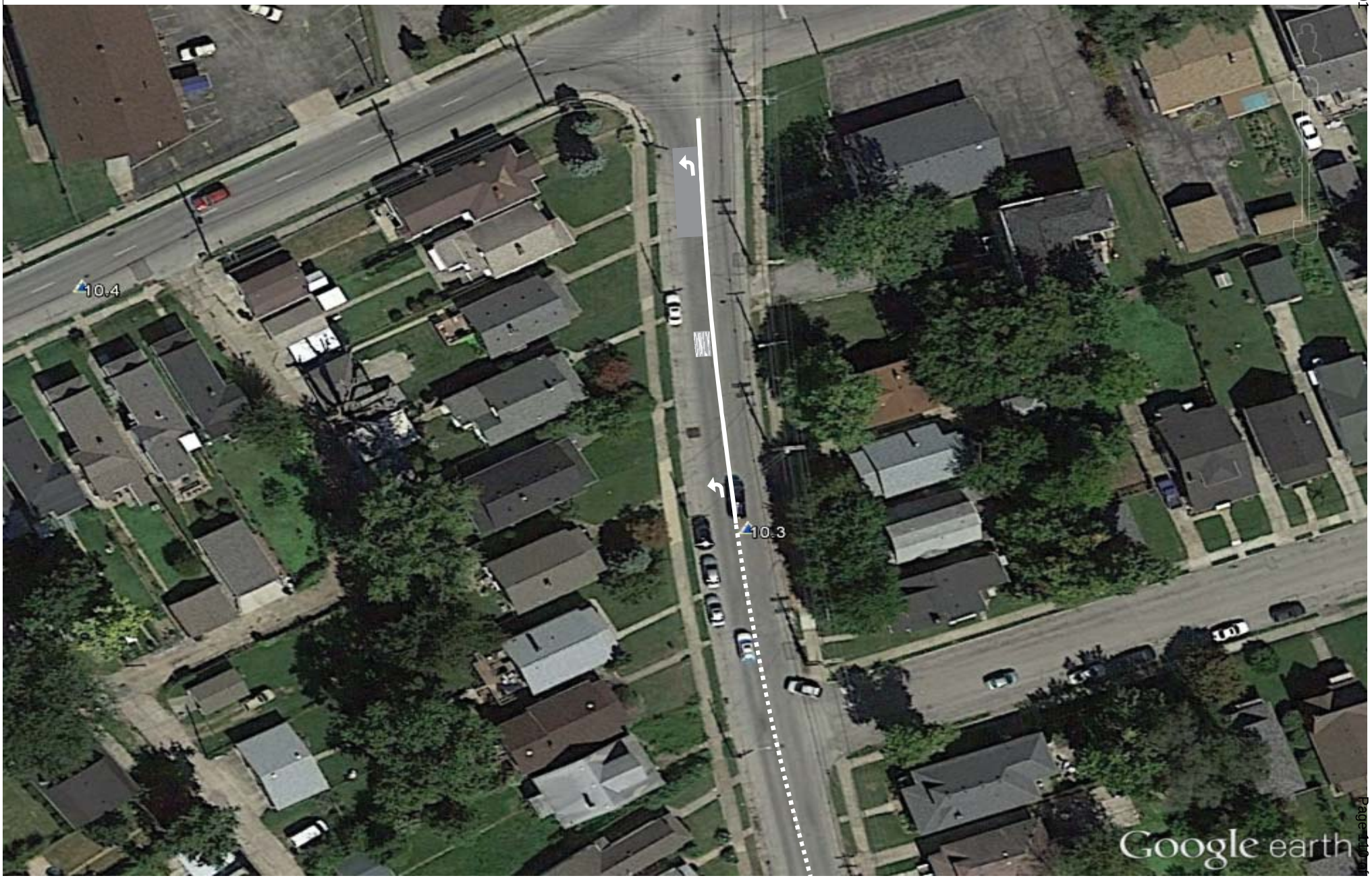
KY 61 (S Preston St) at Eastern Pkwy

Lengthen solid line for existing right turn lane.

Remove solid line between lanes 3 and 4; replace with standard skip stripe.

KY 61 (S Shelby St) at Keswick Blvd

Add approx. 210ft of 8” solid white line.
Add approx. 250ft of 8” dotted white line.
Install left turn arrows and “ONLY” pavement markings as shown.



KY 61 (Lynn St) at S Preston St

Add approx. 210ft of 8” solid white line.

Add approx. 250ft of 8” dotted white line.

Install left and right turn arrows and “ONLY” pavement markings as shown.

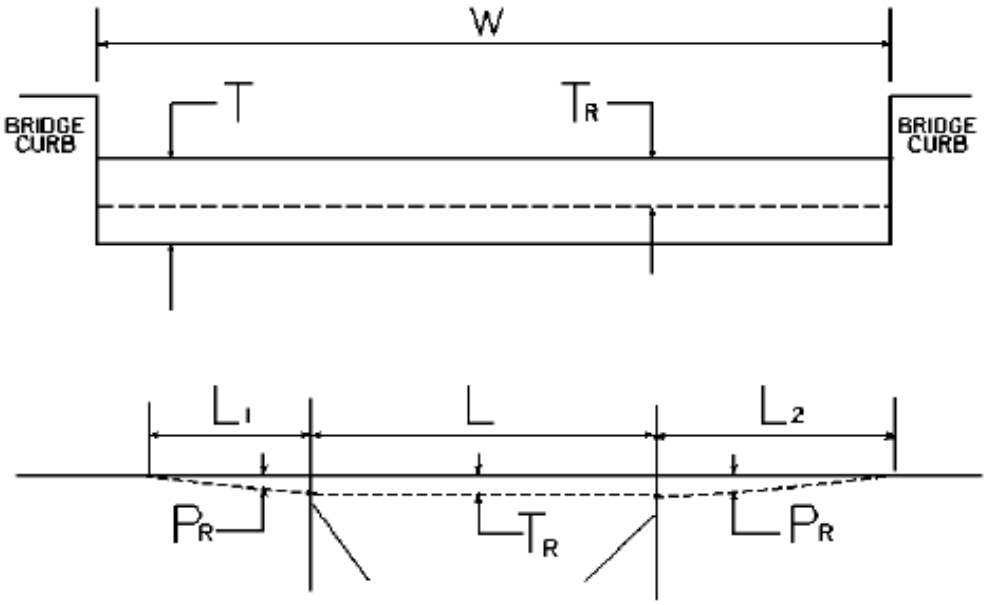
KY 61 (E Brandies Ave) at S Preston St

Add approx. 225ft of 8” solid white line.

Add approx. 225ft of 8” dotted white line.

Install left and right turn arrows, and “ONLY” pavement markings as shown.

BRIDGE DETAIL FOR PAVING PROJECT



W = bridge width curb to curb
T = thickness of existing asphalt overlay
L = length of bridge
L_1 & L_2 = length of approach pavement to be removed
T_R = thickness to be removed and replaced on bridge
P_R = thickness to be removed and replaced on pavement
Note: L_1 & L_2 lengths shall be determined by using a transition rate of 100 ft/in of thickness

Route	Bridge No.	MP	W (ft)	T (in)	L_1 (ft)	L_2 (ft)	T_R (in)	L (ft)	P_R (in)
KY 61	B00031	4.824	84.00	0.00	0.00	0.00	0.00	85.10	1.25
KY 61	B00030	5.003	84.00	0.00	0.00	0.00	0.00	64.20	1.25
KY 61	B00028	5.816	94.00	1.25	0.00	0.00	1.25	33.00	1.25
KY 61	B00029	6.103	94.00	1.25	0.00	0.00	1.25	21.30	1.25
KY 61	B00034	8.111	64.00	0.00	0.00	0.00	0.00	169.40	0.00
KY 61	B00342	8.230	64.00	0.00	0.00	0.00	0.00	524.30	0.00

JEFFERSON CO. KY 61 m.p. 5.15
~LAT/LONG N 38.153789, W 85.695285
STATION 501

SITE LOCATION IS APPROXIMATE AND WILL BE DETERMINED IN THE FIELD AND APPROVED BY DIVISION OF PLANNING PERSONNEL PRIOR TO ANY CONSTRUCTION.

ALL LOOPS SHALL BE 5'X5' SQUARE AND SHALL BE INSTALLED 16' FROM LEADING EDGE TO LEADING EDGE AS SHOWN. PIEZOELECTRIC SENSORS (PIEZOS) SHALL BE INSTALLED 5.5' FROM THE EDGE OF LOOPS WITH THE EDGE OF EACH PIEZO FLUSH WITH THE EDGE OF THE CORRESPONDING DRIVING LANE. LOOPS AND PIEZOS SHALL BE INSTALLED SPLICE-FREE TO THE CABINET AND A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE EACH JUNCTION BOX AND CABINET. ALL LOOPS AND PIEZOS SHALL BE LABELED IN ALL JUNCTION BOXES AND CABINET. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS AND PIEZOS INSIDE THE CABINET.

INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

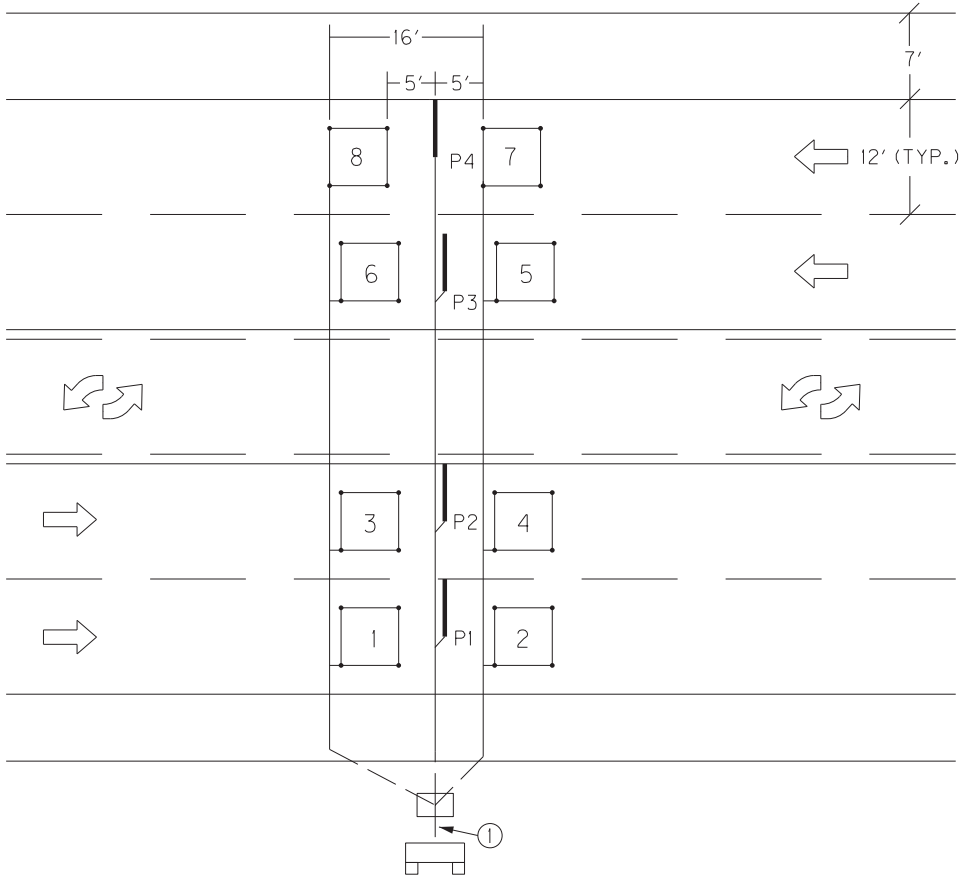
INSTALL ONE (1) TYPE A JUNCTION BOX (JB A1)

INSTALL ONE (1) 20"X20"X8" CABINET MOUNTED TO TWO (2) WOOD POSTS.

REMOVE EXISTING CABINET, WIRE, CONDUIT, POST AND DISPOSE OF OFF JOBSITE.

CODED NOTE:

① INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=

JEFFERSON CO. KY 61 m.p. 6.60
~LAT/LONG N 38.171669, W 85.709604
STATION 607

SITE LOCATION IS APPROXIMATE AND WILL BE DETERMINED IN THE FIELD AND APPROVED BY DIVISION OF PLANNING PERSONNEL PRIOR TO ANY CONSTRUCTION.

ALL LOOPS SHALL BE 5'X5' SQUARE AND SHALL BE INSTALLED 16' FROM LEADING EDGE TO LEADING EDGE AS SHOWN. PIEZOELECTRIC SENSORS (PIEZOS) SHALL BE INSTALLED 5.5' FROM THE EDGE OF LOOPS WITH THE EDGE OF EACH PIEZO FLUSH WITH THE EDGE OF THE CORRESPONDING DRIVING LANE. LOOPS AND PIEZOS SHALL BE INSTALLED SPLICE-FREE TO THE CABINET AND A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE EACH JUNCTION BOX AND CABINET. ALL LOOPS AND PIEZOS SHALL BE LABELED IN ALL JUNCTION BOXES AND CABINET. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS AND PIEZOS INSIDE THE CABINET.

INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

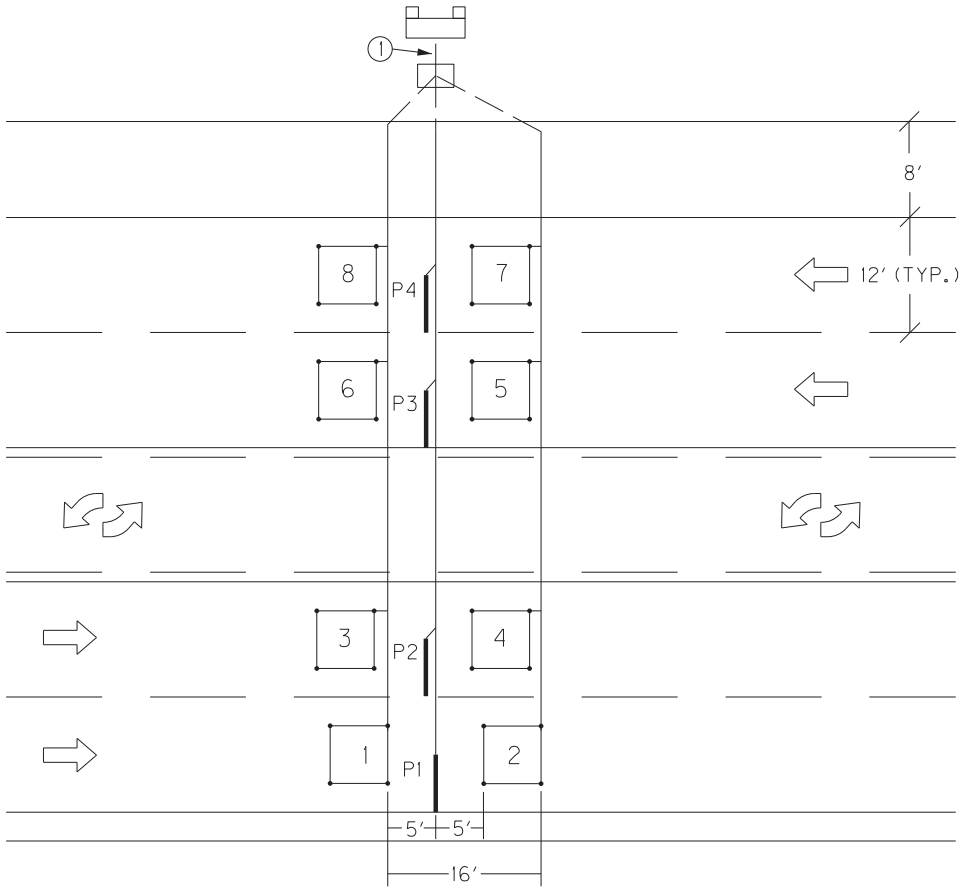
INSTALL ONE (1) TYPE A JUNCTION BOX (JB A1)

INSTALL ONE (1) 20"X20"X8" CABINET MOUNTED TO TWO (2) WOOD POSTS.

REMOVE EXISTING CABINET, WIRE, CONDUIT, POST AND DISPOSE OF OFF JOBSITE.

CODED NOTE:

① INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=

JEFFERSON CO. KY 61 m.p. 8.63
~LAT/LONG N 38.195693, W 85.730311
STATION 785

SITE LOCATION IS APPROXIMATE AND WILL BE DETERMINED IN THE FIELD AND APPROVED BY DIVISION OF PLANNING PERSONNEL PRIOR TO ANY CONSTRUCTION.

ALL LOOPS SHALL BE 5'X5' SQUARE AND SHALL BE INSTALLED 16' FROM LEADING EDGE TO LEADING EDGE AS SHOWN. PIEZOELECTRIC SENSORS (PIEZOS) SHALL BE INSTALLED 5.5' FROM THE EDGE OF LOOPS WITH THE EDGE OF EACH PIEZO FLUSH WITH THE EDGE OF THE CORRESPONDING DRIVING LANE. LOOPS AND PIEZOS SHALL BE INSTALLED SPLICE-FREE TO THE CABINET AND A MINIMUM OF 2' OF WIRE FOR EACH SENSOR SHALL BE COILED INSIDE EACH JUNCTION BOX AND CABINET. ALL LOOPS AND PIEZOS SHALL BE LABELED IN ALL JUNCTION BOXES AND CABINET. DIVISION OF PLANNING PERSONNEL WILL CONNECT THE LOOPS AND PIEZOS INSIDE THE CABINET.

INSTALL ONE (1) 1¼" CONDUIT FROM EACH SAW SLOT TO NEAREST JUNCTION BOX.

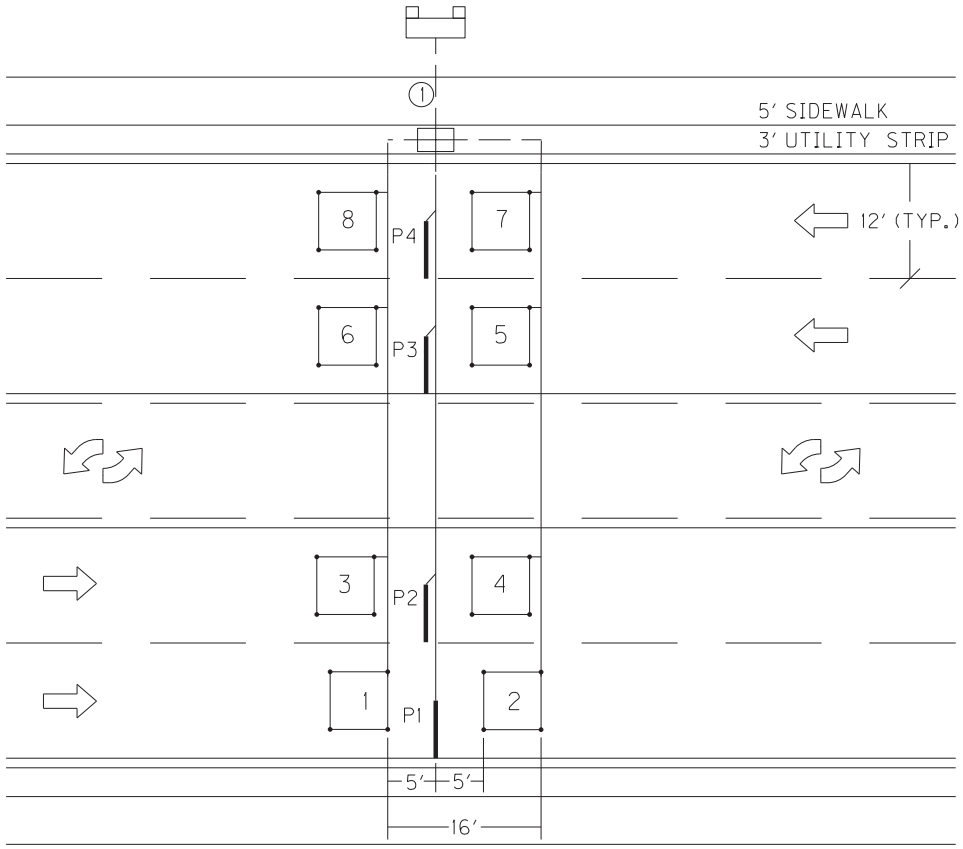
INSTALL ONE (1) TYPE A JUNCTION BOX (JB A1)

INSTALL ONE (1) 20"X20"X8" CABINET MOUNTED TO TWO (2) WOOD POSTS.

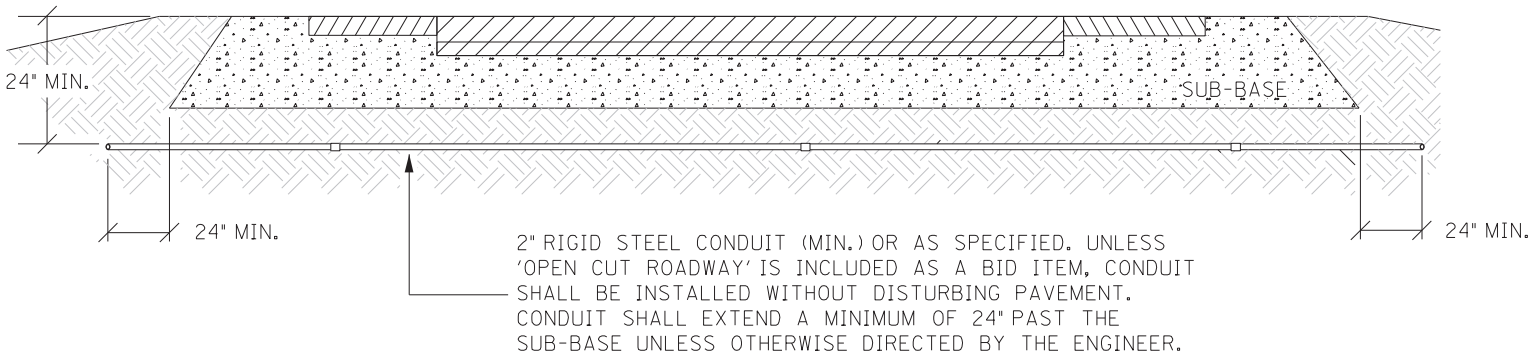
REMOVE EXISTING CABINET, WIRE, CONDUIT, POST AND DISPOSE OF OFF JOBSITE.

CODED NOTE:

① INSTALL ONE (1) 2" CONDUIT.



SCALE 1"=

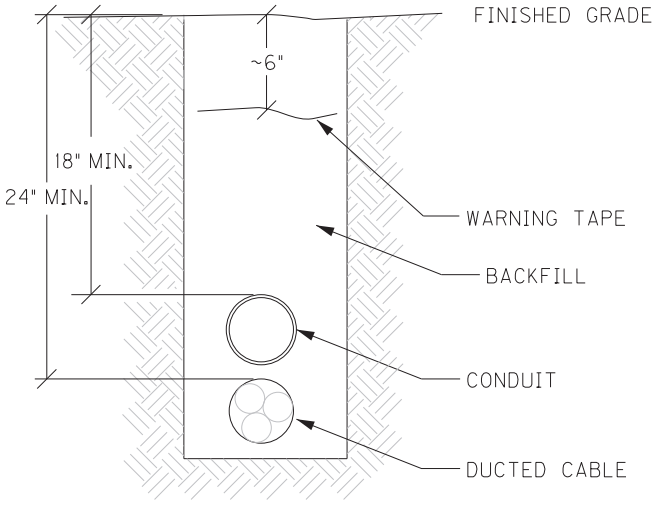


CONDUIT UNDER PAVEMENT

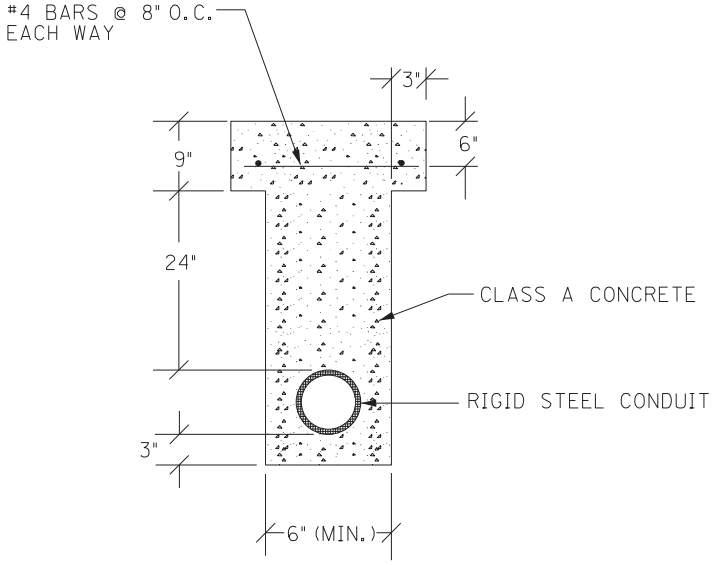
TOTAL TRENCH WIDTH SHALL BE 3" (NOM.) WIDER THAN THE SUM OF THE OUTSIDE DIAMETER(S) OF THE CONDUIT(S) INSTALLED. CONDUIT(S) SHALL BE CENTERED IN TRENCH.

CONTRACTOR SHALL PLACE BACKFILL IN LIFTS (9" MAX.) COMPACT BACKFILL, AND RESTORE DISTURBED AREA TO THE SATISFACTION OF THE ENGINEER

CONTRACTOR SHALL INSTALL UNDERGROUND UTILITY WARNING TAPE ABOVE CONDUIT AS SHOWN.



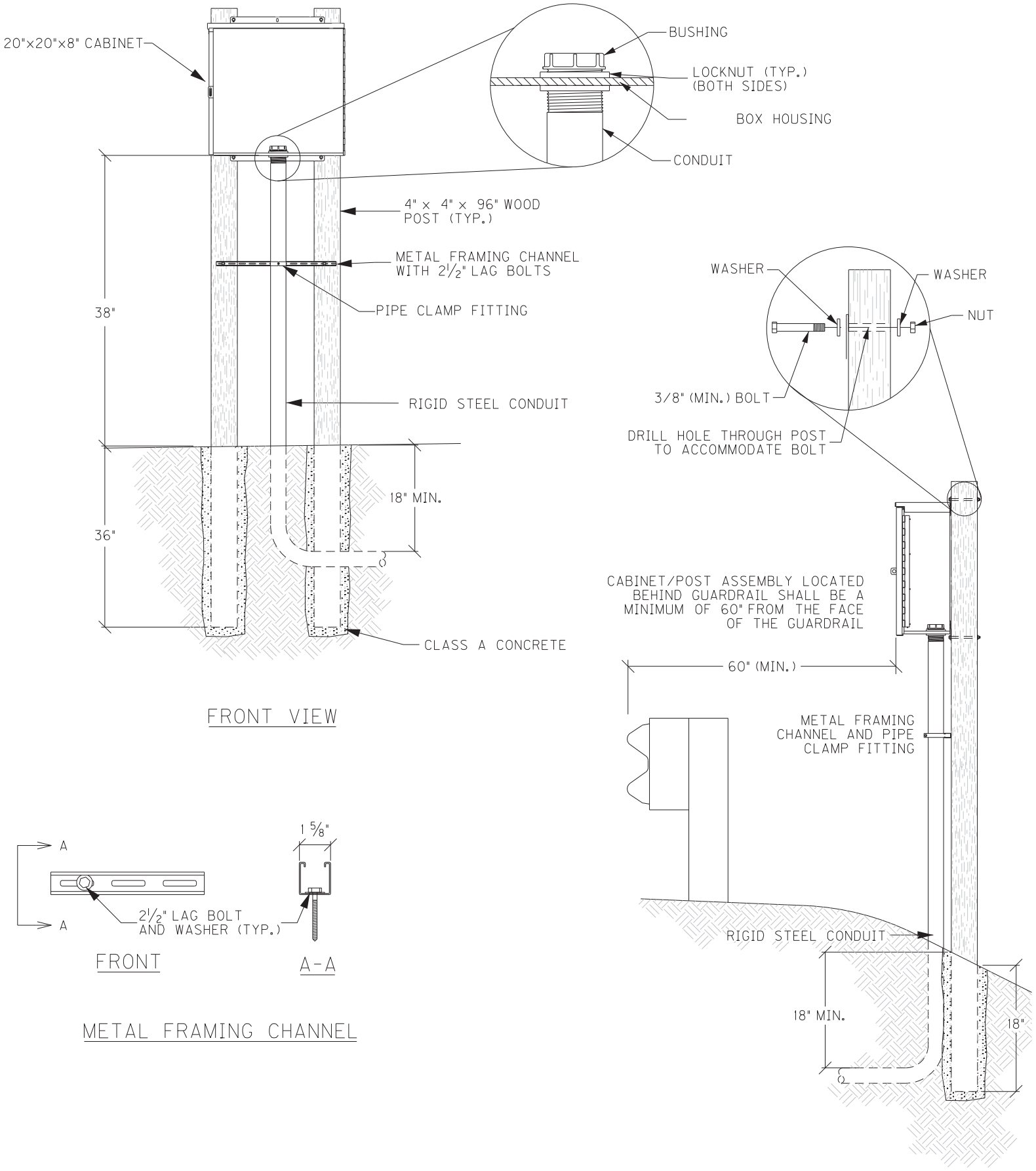
CONDUIT TRENCH



OPEN CUT PAVEMENT DETAIL

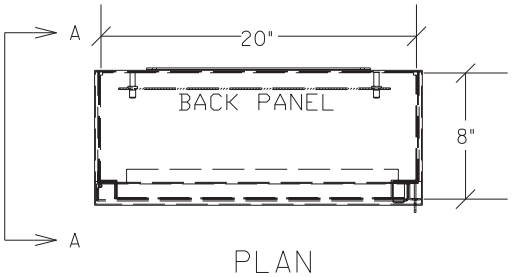
CONDUIT INSTALLATION

NOT TO SCALE

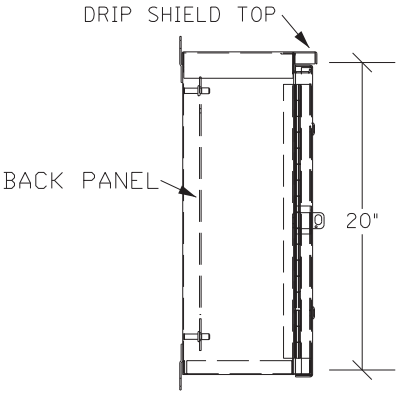


GALVANIZED STEEL CABINET
DOUBLE POST ASSEMBLY

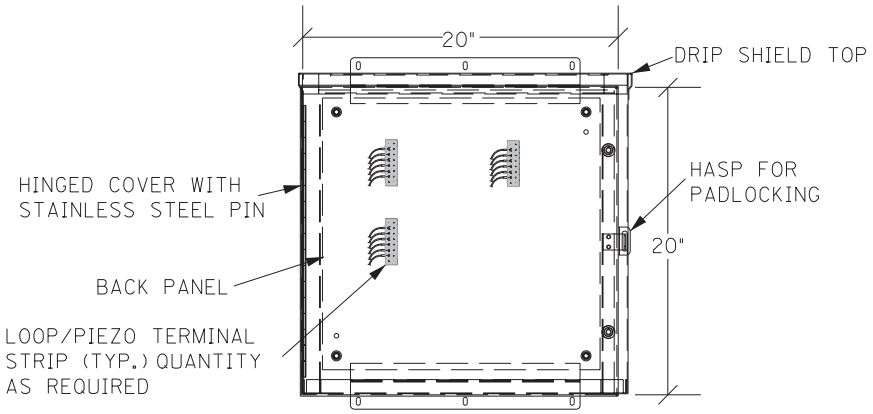
NOT TO SCALE



PLAN

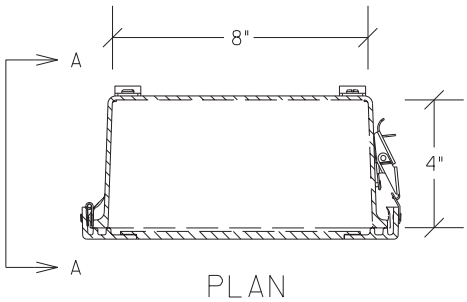


SECTION A-A

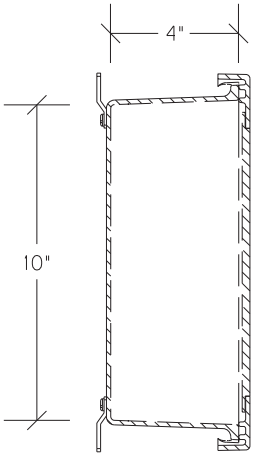


ELEVATION

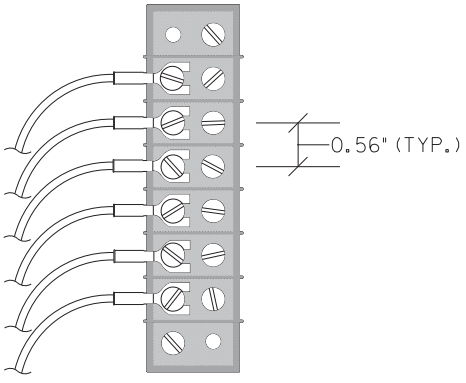
GALVANIZED STEEL CABINET



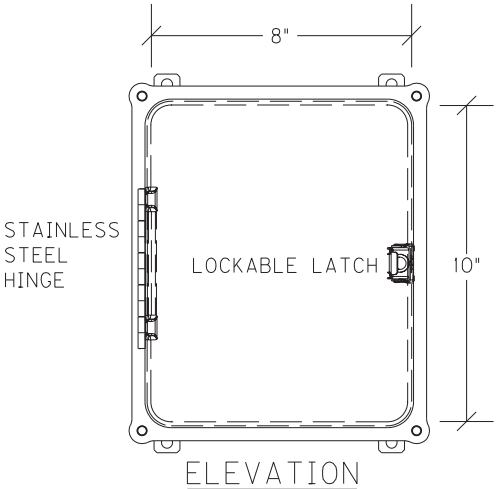
PLAN



SECTION A-A



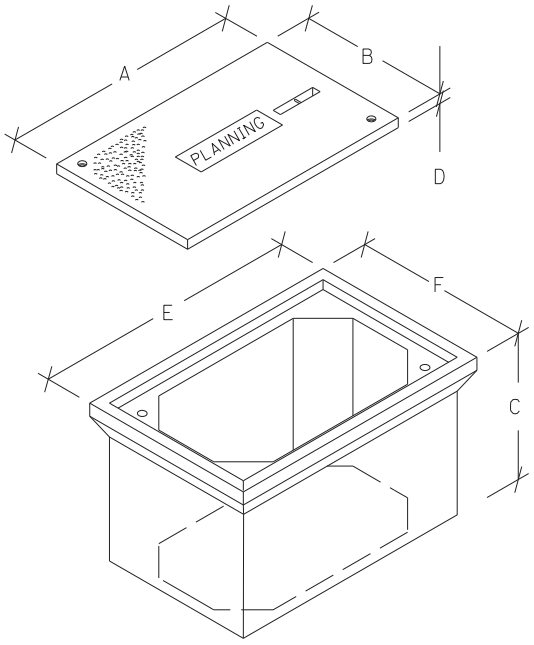
TERMINAL STRIP (TYP.)



ELEVATION

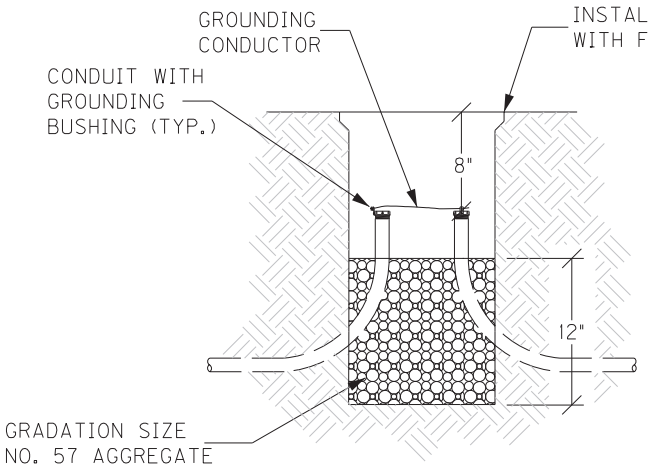
JUNCTION BOX 10"x8"X4"

NOT TO SCALE



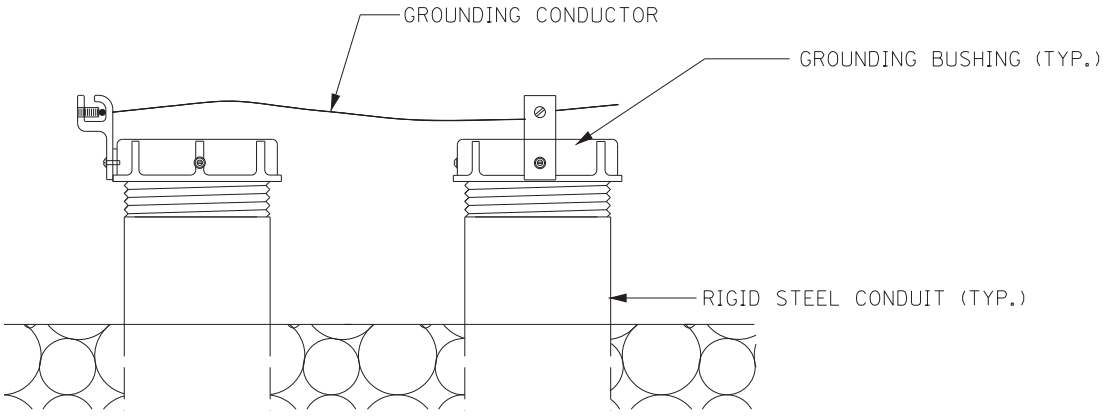
JUNCTION BOX DIMENSIONS (NOMINAL)						
	A	B	C	D*	E	F
TYPE A	23"	14"	18"	2"	25"	16"
TYPE B	18"	11"	12"	1¾"	20"	13"
TYPE C	36"	24"	30"	3"	38"	26"

* MINIMUM
STACKABLE BOXES ARE PERMITTED



WHERE REQUIRED, JUNCTION BOX SHALL BE ORIENTED SUCH THAT THE DIMENSIONS COMPLY WITH THE NATIONAL ELECTRICAL CODE.

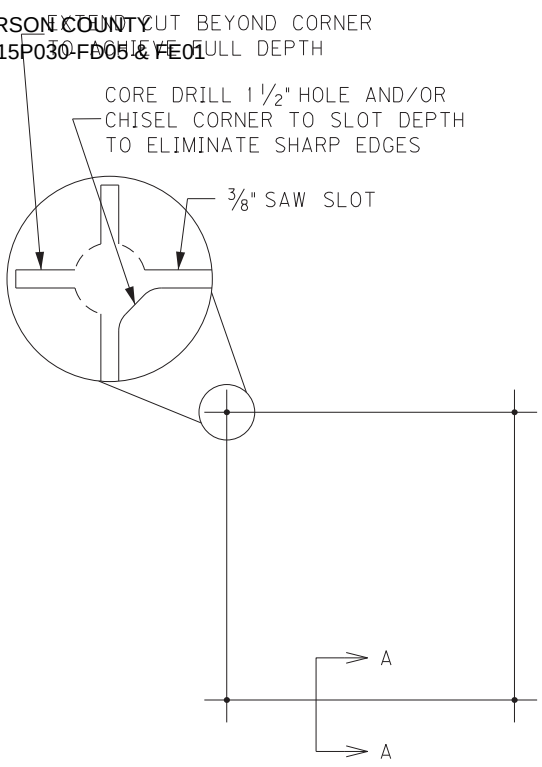
ELEVATION



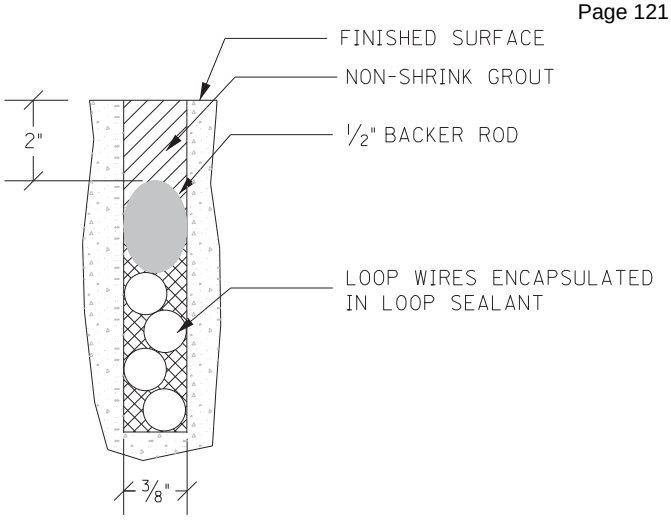
GROUNDING DETAIL

JUNCTION BOX - TYPE A, TYPE B, TYPE C

NOT TO SCALE



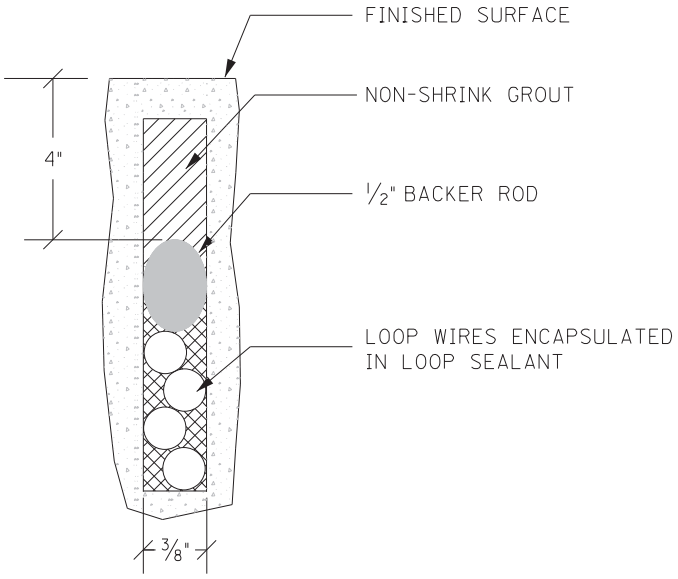
SAW CUT PLAN



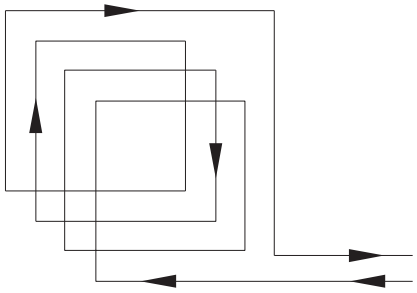
SECTION A-A (CONCRETE)

UNLESS SPECIFIED OTHERWISE, ALL LOOPS SHALL BE 6' x 6' SQUARE, CENTERED IN EACH LANE, WITH FOUR TURNS OF 14 AWG LOOP WIRE.

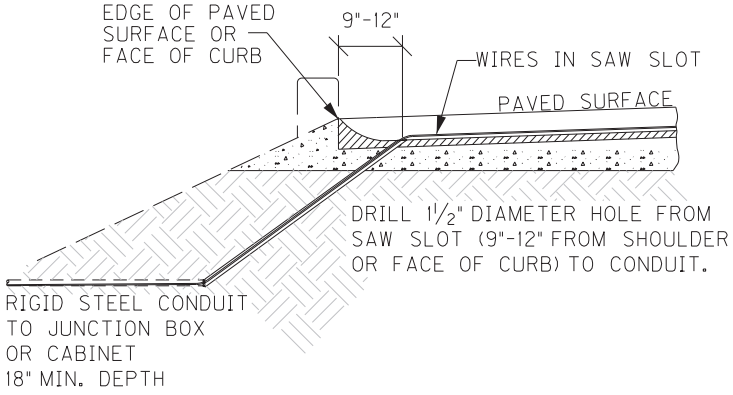
ADJACENT SAW SLOTS SHALL BE A MINIMUM OF 12" APART.



SECTION A-A (ASPHALT)



WIRING PLAN

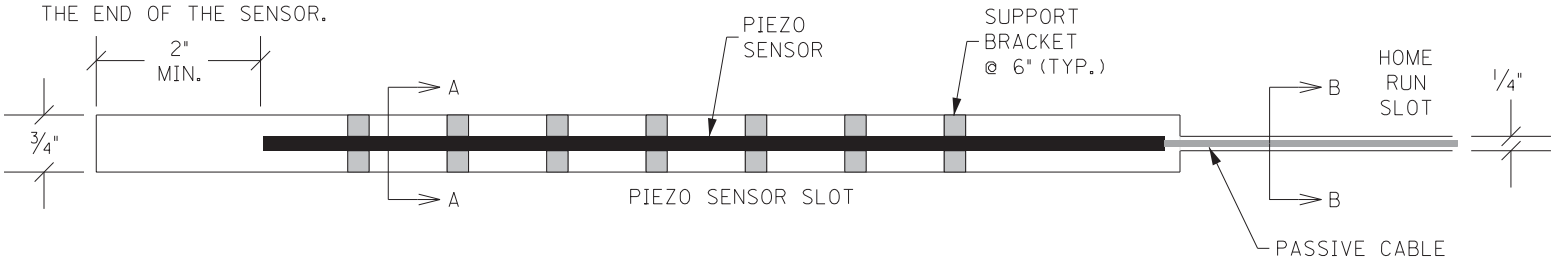


SAW SLOT EDGE OF PAVEMENT TRANSITION

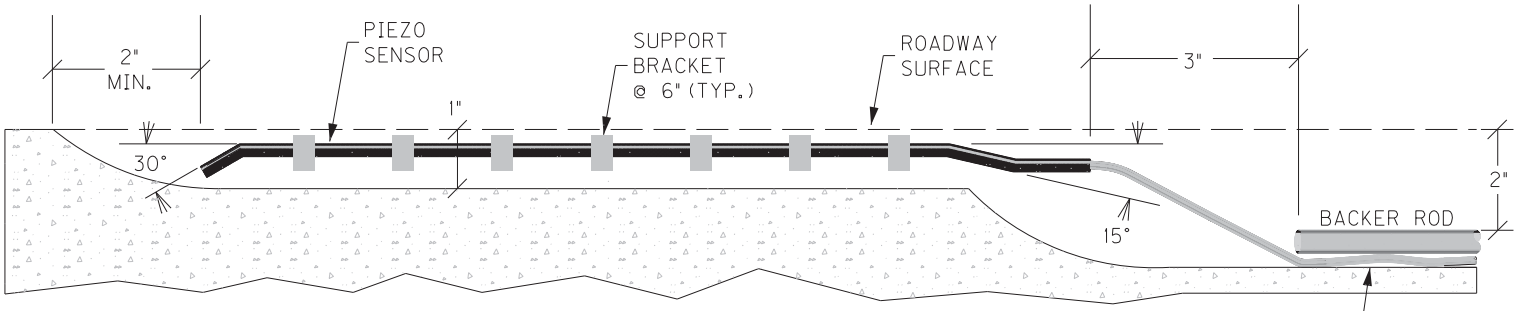
INDUCTIVE LOOP DETECTOR

NOT TO SCALE

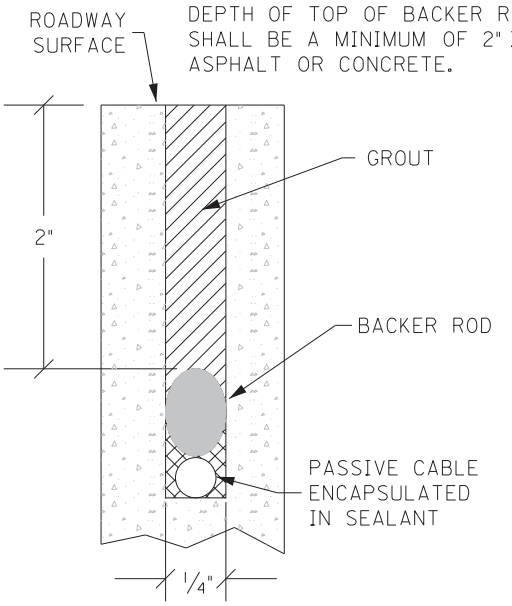
EXTEND SAW SLOT A MINIMUM OF 2" BEYOND THE END OF THE SENSOR.



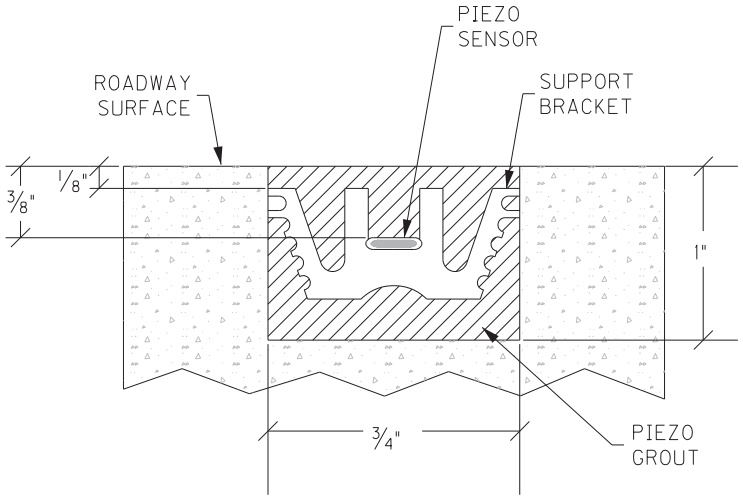
PLAN



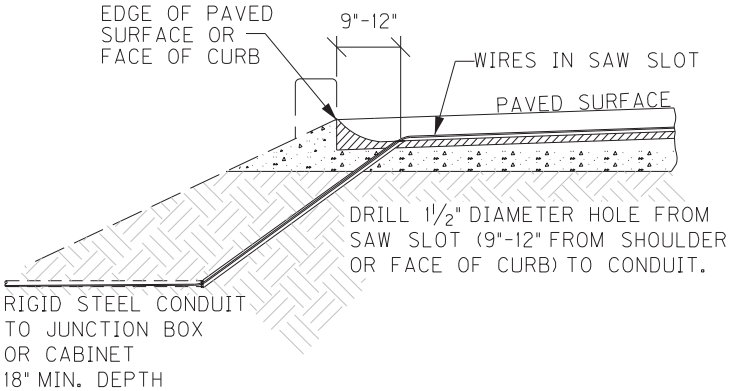
ELEVATION



SECTION B-B



SECTION A-A



SAW SLOT EDGE OF PAVEMENT TRANSITION

PIEZOELECTRIC SENSOR INSTALLATION

NOT TO SCALE

PART II

SPECIFICATIONS AND STANDARD DRAWINGS

SPECIFICATIONS REFERENCE

Any reference in the plans or proposal to previous editions of the *Standard Specifications for Road and Bridge Construction* and *Standard Drawings* are superseded by *Standard Specifications for Road and Bridge Construction, Edition of 2012* and *Standard Drawings, Edition of 2012 with the 2012 Revision.*

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Subsection:	102.15 Process Agent.
Revision:	Replace the 1st paragraph with the following: Every corporation doing business with the Department shall submit evidence of compliance with KRS Sections 14A.4-010, 271B.11-010, 271B.11-070, 271B.11-080, 271B.5-010 and 271B.16-220, and file with the Department the name and address of the process agent upon whom process may be served.
Subsection:	105.13 Claims Resolution Process.
Revision:	Delete all references to TC 63-34 and TC 63-44 from the subsection as these forms are no longer available through the forms library and are forms generated within the AASHTO SiteManager software.
Subsection:	108.03 Preconstruction Conference.
Revision:	Replace 8) Staking with the following: 8) Staking (designated by a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection:	109.07.02 Fuel.
Revision:	Revise item Crushed Aggregate Used for Embankment Stabilization to the following: Crushed Aggregate Used for Stabilization of Unsuitable Materials Used for Embankment Stabilization
	Delete the following item from the table. ~~Crushed Sandstone Base (Cement Treated)~~
Subsection:	110.02 Demobilization.
Revision:	Replace the first part of the first sentence of the second paragraph with the following: Perform all work and operations necessary to accomplish final clean-up as specified in the first paragraph of Subsection 105.12;
Subsection:	112.03.12 Project Traffic Coordinator (PTC).
Revision:	Replace the last paragraph of this subsection with the following: Ensure the designated PTC has sufficient skill and experience to properly perform the task assigned and has successfully completed the qualification courses.
Subsection:	112.04.18 Diversions (By-Pass Detours).
Revision:	Insert the following sentence after the 2nd sentence of this subsection. The Department will not measure temporary drainage structures for payment when the contract documents provide the required drainage opening that must be maintained with the diversion. The temporary drainage structures shall be incidental to the construction of the diversion. If the contract documents fail to provide the required drainage opening needed for the diversion, the cost of the temporary drainage structure will be handled as extra work in accordance with section 109.04.
Subsection:	201.03.01 Contractor Staking.
Revision:	Replace the first paragraph with the following: Perform all necessary surveying under the general supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.

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Subsection:	201.04.01 Contractor Staking.
Revision:	Replace the last sentence of the paragraph with the following: Complete the general layout of the project under the supervision of a Professional Engineer or Land Surveyor licensed in the Commonwealth of Kentucky.
Subsection:	206.04.01 Embankment-in-Place.
Revision:	Replace the fourth paragraph with the following: The Department will not measure **suitable** excavation included in the original plans that is disposed of for payment and will consider it incidental to Embankment-in-Place.
Subsection:	208.02.01 Cement.
Revision:	Replace paragraph with the following: Select Type I or Type II cement conforming to Section 801. Use the same type cement throughout the work.
Subsection:	208.03.06 Curing and Protection.
Revision:	Replace the fourth paragraph with the following: Do not allow traffic or equipment on the finished surface until the stabilized subgrade has cured for a total of 7-days with an ambient air temperature above 40 degrees Fahrenheit. A curing day consists of a continuous 24-hour period in which the ambient air temperature does not fall below 40 degrees Fahrenheit. Curing days will not be calculated consecutively, but must total seven (7) , 24-hour days with the ambient air temperature remaining at or above 40 degrees Fahrenheit before traffic or equipment will be allowed to traverse the stabilized subgrade. The Department may allow a shortened curing period when the Contractor requests. The Contractor shall give the Department at least 3 day notice of the request for a shortened curing period. The Department will require a minimum of 3 curing days after final compaction. The Contractor shall furnish cores to the treated depth of the roadbed at 500 feet intervals for each lane when a shortened curing time is requested. The Department will test cores using an unconfined compression test. Roadbed cores must achieve a minimum strength requirement of 80 psi.
Subsection:	208.03.06 Curing and Protection.
Revision:	Replace paragraph eight with the following: At no expense to the Department, repair any damage to the subgrade caused by freezing.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	A) Seed Mixtures for Permanent Seeding.
Revision:	Revise **Seed Mix Type I** to the mixture shown below: 50% Kentucky 31 Tall Fescue (Festuca arundinacea) 35% Hard Fescue (Festuca (Festuca longifolia) 10% Ryegrass, Perennial (Lolium perenne) 5% White Dutch Clover (Trifolium repens)
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	A) Seed Mixtures for Permanent Seeding.
Number:	2)
Revision:	Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 4, 5, 6, and 7. Apply seed mix Type II at a minimum application rate of 100 pounds per acre. If adjacent to a golf course replace the crown vetch with Kentucky 31 Tall Fescue.

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Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	A) Seed Mixtures for Permanent Seeding.
Number:	3)
Revision:	Replace the paragraph with the following: Permanent Seeding on Slopes Greater than 3:1 in Highway Districts 1, 2, 3, 8, 9, 10, 11, and 12. Apply seed mix Type III at a minimum application rate of 100 pounds per acre. If adjacent to crop land or golf course, replace the Sericea Lespedeza with Kentucky 31 Fescue.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	B) Procedures for Permanent Seeding.
Revision:	Delete the first sentence of the section.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	B) Procedures for Permanent Seeding.
Revision:	Replace the second and third sentence of the section with the following: Prepare a seedbed and apply an initial fertilizer that contains a minimum of 100 pounds of nitrogen, 100 pounds of phosphate, and 100 pounds of potash per acre. Apply agricultural limestone to the seedbed when the Engineer determines it is needed. When required, place agricultural limestone at a rate of 3 tons per acre.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	D) Top Dressing.
Revision:	Change the title of part to D) Fertilizer.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	D) Fertilizer.
Revision:	Replace the first paragraph with the following: Apply fertilizer at the beginning of the seeding operation and after vegetation is established. Use fertilizer delivered to the project in bags or bulk. Apply initial fertilizer to all areas prior to the seeding or sodding operation at the application rate specified in 212.03.03 B). Apply 20-10-10 fertilizer to the areas after vegetation has been established at a rate of 11.5 pounds per 1,000 square feet. Obtain approval from the Engineer prior to the 2nd fertilizer application. Reapply fertilizer to any area that has a streaked appearance. The reapplication shall be at no additional cost to the Department. Re-establish any vegetation severely damaged or destroyed because of an excessive application of fertilizer at no cost to the Department.
Subsection:	212.03.03 Permanent Seeding and Protection.
Part:	D) Fertilizer.
Revision:	Delete the second paragraph.
Subsection:	212.04.04 Agricultural Limestone.
Revision:	Replace the entire section with the following: The Department will measure the quantity of agricultural limestone in tons.
Subsection:	212.04.05 Fertilizer.
Revision:	Replace the entire section with the following: The Department will measure fertilizer used in the seeding or sodding operations for payment. The Department will measure the quantity by tons.

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Subsection:	212.05 PAYMENT.
Revision:	Delete the following item code:
	Code Pay Item Pay Unit
	05966 Topdressing Fertilizer Ton
Subsection:	212.05 PAYMENT.
Revision:	Add the following pay items:
	Code Pay Item Pay Unit
	05963 Initial Fertilizer Ton
	05964 20-10-10 Fertilizer Ton
	05992 Agricultural Limestone Ton
Subsection:	213.03.02 Progress Requirements.
Revision:	Replace the last sentence of the third paragraph with the following:
	Additionally, the Department will apply a penalty equal to the liquidated damages when all aspects of the work are not coordinated in an acceptable manner within 7 calendar days after written notification.
Subsection:	213.03.05 Temporary Control Measures.
Part:	E) Temporary Seeding and Protection.
Revision:	Delete the second sentence of the first paragraph.
Subsection:	304.02.01 Physical Properties.
Table:	Required Geogrid Properties
Revision:	Replace all references to Test Method "GRI-GG2-87" with ASTM D 7737.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	B) Sampling.
Revision:	Replace the second sentence with the following:
	The Department will determine when to obtain the quality control samples using the random-number feature of the mix design submittal and approval spreadsheet. The Department will randomly determine when to obtain the verification samples required in Subsections 402.03.03 and 402.03.04 using the Asphalt Mixture Sample Random Tonnage Generator.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	3) VMA.
Revision:	Add the following paragraph below Number 3) VMA:
	Retain the AV/VMA specimens and one additional corresponding G_{mm} sample for 5 working days for mixture verification testing by the Department. For Specialty Mixtures, retain a mixture sample for 5 working days for mixture verification testing by the Department. When the Department's test results do not verify that the Contractor's quality control test results are within the acceptable tolerances according to Subsection 402.03.03, retain the samples and specimens from the affected sublot(s) for the duration of the project.
Subsection:	402.03.02 Contractor Quality Control and Department Acceptance.
Part:	D) Testing Responsibilities.
Number:	4) Density.
Revision:	Replace the second sentence of the Option A paragraph with the following:
	Perform coring by the end of the following work day.

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Subsection: **Part:** **Number:** **Revision:**	402.03.02 Contractor Quality Control and Department Acceptance. D) Testing Responsibilities. 5) Gradation. Delete the second paragraph.
Subsection: **Part:** **Number:** **Revision:**	402.03.02 Contractor Quality Control and Department Acceptance. H) Unsatisfactory Work. 1) Based on Lab Data. Replace the second paragraph with the following: When the Engineer determines that safety concerns or other considerations prohibit an immediate shutdown, continue work and the Department will make an evaluation of acceptability according to Subsection 402.03.05.
Subsection: **Revision:**	402.03.03 Verification. Replace the first paragraph with the following: **402.03.03 Mixture Verification.** For volumetric properties, the Department will perform a minimum of one verification test for AC, AV, and VMA according to the corresponding procedures as given in Subsection 402.03.02. The Department will randomly determine when to obtain the verification sample using the Asphalt Mixture Sample Random Tonnage Generator. For specialty mixtures, the Department will perform one AC and one gradation determination per lot according to the corresponding procedures as given in Subsection 402.03.02. However, Department personnel will not perform AC determinations according to KM 64-405. The Contractor will obtain a quality control sample at the same time the Department obtains the mixture verification sample and perform testing according to the procedures given in Subsection 402.03.02. If the Contractor's quality control sample is verified by the Department's test results within the tolerances provided below, the Contractor's sample will serve as the quality control sample for the affected sublot. The Department may perform the mixture verification test on the Contractor's equipment or on the Department's equipment.
Subsection: **Part:** **Revision:**	402.03.03 Verification. A) Evaluation of Sublot(s) Verified by Department. Replace the third sentence of the second paragraph with the following: When the paired *t* -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.
Subsection: **Part:** **Revision:**	402.03.03 Verification. B) Evaluation of Sublots Not Verified by Department. Replace the third sentence of the first paragraph with the following: When differences between test results are not within the tolerances listed below, the Department will resolve the discrepancy according to Subsection 402.03.05.

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Subsection: **Part:** **Revision:**	402.03.03 Verification. B) Evaluation of Sublots Not Verified by Department. Replace the third sentence of the second paragraph with the following: When the *F* -test or *t* -test indicates that the Contractor's data and Department's data are possibly not from the same population, the Department will investigate the cause for the difference according to Subsection 402.03.05 and implement corrective measures as the Engineer deems appropriate.
Subsection: **Part:** **Revision:**	402.03.03 Verification. C) Test Data Patterns. Replace the second sentence with the following: When patterns indicate substantial differences between the verified and non-verified sublots, the Department will perform further comparative testing according to subsection 402.03.05.
Subsection: **Revision:**	402.03 CONSTRUCTION. Add the following subsection: **402.03.04 Testing Equipment and Technician Verification.** For mixtures with a minimum quantity of 20,000 tons and for every 20,000 tons thereafter, the Department will obtain an additional verification sample at random using the Asphalt Mixture Sample Random Tonnage Generator in order to verify the integrity of the Contractor's and Department's laboratory testing equipment and technicians. The Department will obtain a mixture sample of at least 150 lb at the asphalt mixing plant according to KM 64-425 and split it according to AASHTO R 47. The Department will retain one split portion of the sample and provide the other portion to the Contractor. At a later time convenient to both parties, the Department and Contractor will simultaneously reheat the sample to the specified compaction temperature and test the mixture for AV and VMA using separate laboratory equipment according to the corresponding procedures given in Subsection 402.03.02. The Department will evaluate the differences in test results between the two laboratories. When the difference between the results for AV or VMA is not within ± 2.0 percent, the Department will investigate and resolve the discrepancy according to Subsection 402.03.05.
Subsection: **Revision:**	402.03.04 Dispute Resolution. Change the subsection number to 402.03.05.
Subsection: **Part:** **Table:** **Revision:**	402.05 PAYMENT. Lot Pay Adjustment Schedule Compaction Option A Base and Binder Mixtures AC Replace the Deviation from JMF(%) that corresponds to a Pay Value of 0.95 to ±0.6.
Subsection: **Revision:**	403.02.10 Material Transfer Vehicle (MTV). Replace the first sentence with the following: In addition to the equipment specified above, provide a MTV with the following minimum characteristics:
Subsection: **Revision:**	412.02.09 Material Transfer Vehicle (MTV). Replace the paragraph with the following: Provide and utilize a MTV with the minimum characteristics outlined in section 403.02.10.

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Subsection:	412.03.07 Placement and Compaction.
Revision:	Replace the first paragraph with the following: Use a MTV when placing SMA mixture in the driving lanes. The MTV is not required on ramps and/or shoulders unless specified in the contract. When the Engineer determines the use of the MTV is not practical for a portion of the project, the Engineer may waive its requirement for that portion of pavement by a letter documenting the waiver.
Subsection:	412.04 MEASUREMENT.
Revision:	Add the following subsection: 412.04.03. Material Transfer Vehicle (MTV). The Department will not measure the MTV for payment and will consider its use incidental to the asphalt mixture.
Subsection:	501.03.19 Surface Tolerances and Testing Surface.
Part:	B) Ride Quality.
Revision:	Add the following to the end of the first paragraph: The Department will specify if the ride quality requirements are Category A or Category B when ride quality is specified in the Contract. Category B ride quality requirements shall apply when the Department fails to classify which ride quality requirement will apply to the Contract.
Subsection:	603.03.06 Cofferdams.
Revision:	Replace the seventh sentence of paragraph one with the following: Submit drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection:	605.03.04 Tack Welding.
Revision:	Insert the subsection and the following: 605.03.04 Tack Welding. The Department does not allow tack welding.
Subsection:	606.03.17 Special Requirements for Latex Concrete Overlays.
Part:	A) Existing Bridges and New Structures.
Number:	1) Prewetting and Grout-Bond Coat.
Revision:	Add the following sentence to the last paragraph: Do not apply a grout-bond coat on bridge decks prepared by hydrodemolition.
Subsection:	609.03 Construction.
Revision:	Replace Subsection 609.03.01 with the following: 609.03.01 A) Swinging the Spans. Before placing concrete slabs on steel spans or precast concrete release the temporary erection supports under the bridge and swing the span free on its supports. 609.03.01 B) Lift Loops. Cut all lift loops flush with the top of the precast beam once the beam is placed in the final location and prior to placing steel reinforcement. At locations where lift loops are cut, paint the top of the beam with galvanized or epoxy paint.
Subsection:	611.03.02 Precast Unit Construction.
Revision:	Replace the first sentence of the subsection with the following: Construct units according to ASTM C1577, **replacing Table 1 (Design Requirements for Precast Concrete Box Sections Under Earth, Dead and HL-93 Live Load Conditions) with KY Table 1 (Precast Culvert KYHL-93 Design Table)**, and Section 605 with the following exceptions and additions:

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Subsection: **Number:** **Revision:**	613.03.01 Design. 2) Replace "AASHTO Standard Specifications for Highway Bridges" with "AASHTO LRFD Bridge Design Specifications"
Subsection: **Revision:**	615.06.02 Add the following sentence to the end of the subsection. The ends of units shall be normal to walls and centerline except exposed edges shall be beveled ¾ inch.
Subsection: **Revision:**	615.06.03 Placement of Reinforcement in Precast 3-Sided Units. Replace the reference of 6.6 in the section to 615.06.06.
Subsection: **Revision:**	615.06.04 Placement of Reinforcement for Precast Endwalls. Replace the reference of 6.7 in the section to 615.06.07.
Subsection: **Revision:**	615.06.06 Laps, Welds, and Spacing for Precast 3-Sided Units. Replace the subsection with the following: Tension splices in the circumferential reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. The overlap of welded wire fabric shall be measured between the outer most longitudinal wires of each fabric sheet. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. For splices other than tension splices, the overlap shall be a minimum of 12" for welded wire fabric or deformed billet-steel bars. The spacing center to center of the circumferential wires in a wire fabric sheet shall be no less than 2 inches and no more than 4 inches. The spacing center to center of the longitudinal wires shall not be more than 8 inches. The spacing center to center of the longitudinal distribution steel for either line of reinforcing in the top slab shall be not more than 16 inches.
Subsection: **Revision:**	615.06.07 Laps, Welds, and Spacing for Precast Endwalls. Replace the subsection with the following: Splices in the reinforcement shall be made by lapping. Laps may not be tack welded together for assembly purposes. For smooth welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.2 and AASHTO 2012 Bridge Design Guide Section 5.11.6.3. For deformed welded wire fabric, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.5.1 and AASHTO 2012 Bridge Design Guide Section 5.11.6.2. For deformed billet-steel bars, the overlap shall meet the requirements of AASHTO 2012 Bridge Design Guide Section 5.11.2.1. The spacing center-to-center of the wire fabric sheet shall not be less than 2 inches or more than 8 inches.

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Subsection:	615.08.01 Type of Test Specimen.
Revision:	Replace the subsection with the following: Start-up slump, air content, unit weight, and temperature tests will be performed each day on the first batch of concrete. Acceptable start-up results are required for production of the first unit. After the first unit has been established, random acceptance testing is performed daily for each 50 yd^3 (or fraction thereof). In addition to the slump, air content, unit weight, and temperature tests, a minimum of one set of cylinders shall be required each time plastic property testing is performed.
Subsection:	615.08.02 Compression Testing.
Revision:	Delete the second sentence.
Subsection:	615.08.04 Acceptability of Core Tests.
Revision:	Delete the entire subsection.
Subsection:	615.12 Inspection.
Revision:	Add the following sentences to the end of the subsection: Units will arrive at jobsite with the "Kentucky Oval" stamped on the unit which is an indication of acceptable inspection at the production facility. Units shall be inspected upon arrival for any evidence of damage resulting from transport to the jobsite.
Subsection:	716.02.02 Paint.
Revision:	Replace sentence with the following: Conform to Section 821.
Subsection:	716.03 CONSTRUCTION.
Revision:	Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,
Subsection:	716.03.02 Lighting Standard Installation.
Revision:	Replace the second sentence with the following: Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	A) Conventional Installation.
Revision:	Replace the third sentence with the following: Orient the transformer base so the door is positioned on the side away from on-coming traffic.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	A) Conventional Installation.
Number:	1) Breakaway Installation and Requirements.
Revision:	Replace the first sentence with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	B) High Mast Installation
Revision:	Replace the first sentence with the following: Install each high mast pole as noted on plans.
Subsection:	716.03.02 Lighting Standard Installation.
Part:	B) High Mast Installation
Number:	2) Concrete Base Installation
Revision:	Modification of Chart and succeeding paragraphs within this section:

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Drilled Shaft Depth Data							
Level Ground		3:1 Ground Slope		2:1 Ground Slope		1.5:1 Ground Slope (2)	
Soil	Rock	Soil	Rock	Soil	Rock	Soil	Rock
17 ft	7 ft	19 ft	7 ft	20 ft	7 ft	(1)	7 ft

Steel Requirements			
Vertical Bars		Ties or Spiral	
Size	Total	Size	Spacing or Pitch
#10	16	#4	12 inch

(1): Shaft length is 22' for cohesive soil only. For cohesionless soil, contact geotechnical branch for design.
(2): Do not construct high mast drilled shafts on ground slopes steeper than 1.5:1 without the approval of the Division of Traffic.

If rock is encountered during drilling operations and confirmed by the engineer to be of sound quality, the shaft is only required to be further advanced into the rock by the length of rock socket shown in the table. The total length of the shaft need not be longer than that of soil alone. Both longitudinal rebar length and number of ties or spiral length shall be adjusted accordingly.

If a shorter depth is desired for the drilled shaft, the contractor shall provide, for the state's review and approval, a detailed column design with individual site specific soil and rock analysis performed and approved by a Professional Engineer licensed in the Commonwealth of Kentucky.

Spiral reinforcement may be substituted for ties. If spiral reinforcement is used, one and one-half closed coils shall be provided at the ends of each spiral unit. Subsurface conditions consisting of very soft clay or very loose saturated sand could result in soil parameters weaker than those assumed. Engineer shall consult with the geotechnical branch if such conditions are encountered.

The bottom of the drilled hole shall be firm and thoroughly cleaned so no loose or compressible materials are present at the time of the concrete placement. If the drilled hole contains standing water, the concrete shall be placed using a tremie to displace water. Continuous concrete flow will be required to insure full displacement of any water.

The reinforcement and anchor bolts shall be adequately supported in the proper positions so no movement occurs during concrete placement. Welding of anchor bolts to the reinforcing cage is unacceptable, templates shall be used. Exposed portions of the foundation shall be formed to create a smooth finished surface. All forming shall be removed upon completion of foundation construction.

Subsection: 716.03.03 Trenching.
Part: A) Trenching of Conduit for Highmast Ducted Cables.
Revision: Add the following after the first sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.

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Subsection:	716.03.03 Trenching.
Part:	B) Trenching of Conduit for Non-Highmast Cables.
Revision:	Add the following after the second sentence: If depths greater than 24 inches are necessary for either situation listed previously, obtain the Engineer's approval and maintain the required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.
Subsection:	716.03.10 Junction Boxes.
Revision:	Replace subsection title with the following: Electrical Junction Box.
Subsection:	716.04.07 Pole with Secondary Control Equipment.
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure mounting the cabinet to the pole, backfilling, restoration, any necessary hardware to anchor pole, or electrical inspection fees, and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breaker, contactor, manual switch, ground rods, and ground wires and will consider them incidental to this item of work.
Subsection:	716.04.08 Lighting Control Equipment.
Revision:	Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished and installed. The Department will not measure constructing the concrete base, excavation, backfilling, restoration, any necessary anchors, or electrical inspection fees, and will consider them incidental to this item of work. The Department will also not measure furnishing and installing electrical service conductors, specified conduits, meter base, transformer, service panel, fused cutout, fuses, lighting arrestors, photoelectrical control, circuit breakers, contactor, manual switch, ground rods, and ground wires and will consider them incidental to this item of work.
Subsection:	716.04.09 Luminaire.
Revision:	Replace the first sentence with the following: The Department will measure the quantity as each individual unit furnished and installed.
Subsection:	716.04.10 Fused Connector Kits.
Revision:	Replace the first sentence with the following: The Department will measure the quantity as each individual unit furnished and installed.
Subsection:	716.04.13 Junction Box.
Revision:	Replace the subsection title with the following: Electrical Junction Box Type Various.
Subsection:	716.04.13 Junction Box.
Part:	A) Junction Electrical.
Revision:	Rename A) Junction Electrical to the following: A) Electrical Junction Box.
Subsection:	716.04.14 Trenching and Backfilling.
Revision:	Replace the second sentence with the following: The Department will not measure excavation, backfilling, underground utility warning tape (if required), the restoration of disturbed areas to original condition, and will consider them incidental to this item of work.

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Subsection: 716.04.18 Remove Lighting.
Revision: Replace the paragraph with the following:
The Department will measure the quantity as a lump sum for the removal of lighting equipment. The Department will not measure the disposal of all equipment and materials off the project by the contractor. The Department also will not measure the transportation of the materials and will consider them incidental to this item of work.

Subsection: 716.04.20 Bore and Jack Conduit.
Revision: Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway. Construction methods shall be in accordance with Sections 706.03.02, paragraphs 1, 2, and 4.

Subsection: 716.05 PAYMENT.
Revision: Replace items 04810-04811, 20391NS835 and, 20392NS835 under Code, Pay Item, and Pay Unit with the following:

Code	Pay Item	Pay Unit
04810	Electrical Junction Box	Each
04811	Electrical Junction Box Type B	Each
20391NS835	Electrical Junction Box Type A	Each
20392NS835	Electrical Junction Box Type C	Each

Subsection: 723.02.02 Paint.
Revision: Replace sentence with the following: Conform to Section 821.

Subsection: 723.03 CONSTRUCTION.
Revision: Replace bullet 5) with the following: 5) AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims,

Subsection: 723.03.02 Poles and Bases Installation.
Revision: Replace the first sentence with the following:
Regardless of the station and offset noted, locate all poles/bases behind the guardrail a minimum of four feet from the front face of the guardrail to the front face of the pole base.

Subsection: 723.03.02 Poles and Bases Installation.
Part: A) Steel Strain and Mastarm Poles Installation
Revision: Replace the second paragraph with the following: For concrete base installation, see Section 716.03.02, B), 2), Paragraphs 2-7. Drilled shaft depth shall be based on the soil conditions encountered during drilling and slope condition at the site. Refer to the design chart below:

Subsection: 723.03.02 Poles and Bases Installation.
Part: B) Pedestal or Pedestal Post Installation.
Revision: Replace the fourth sentence of the paragraph with the following: For breakaway supports, conform to Section 12 of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.

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Subsection: **Part:** **Revision:**	723.03.03 Trenching. A) Under Roadway. Add the following after the second sentence: If depths greater than 24 inches are necessary, obtain the Engineer's approval and maintain ether required conduit depths coming into the junction boxes. No payment for additional junction boxes for greater depths will be allowed.
Subsection: **Revision:**	723.03.11 Wiring Installation. Add the following sentence between the fifth and sixth sentences: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
Subsection: **Revision:**	723.03.12 Loop Installation. Replace the fourth sentence of the 2nd paragraph with the following: Provide an extra two feet of loop wire and lead-in past the installed conduit in poles, pedestals, and junction boxes.
Subsection: **Revision:**	723.04.02 Junction Box. Replace subsection title with the following: Electrical Junction Box Type Various.
Subsection: **Revision:**	723.04.03 Trenching and Backfilling. Replace the second sentence with the following: The Department will not measure excavation, backfilling, underground utility warning tape (if required), the restoration of disturbed areas to original condition, and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.10 Signal Pedestal. Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, specified conduits, fittings, ground rod, ground wire, backfilling, restoring disturbed areas, or other necessary hardware and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.15 Loop Saw Slot and Fill. Replace the second sentence with the following: The Department will not measure sawing, cleaning and filling induction loop saw slot, loop sealant, backer rod, and grout and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.16 Pedestrian Detector. Replace the paragraph with the following: The Department will measure the quantity as each individual unit furnished, installed and connected to pole/pedestal. The Department will not measure installing R10-3e (with arrow) sign, furnishing and installing mounting hardware for sign and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.18 Signal Controller- Type 170. Replace the second sentence with the following: The Department will not measure constructing the concrete base or mounting the cabinet to the pole, connecting the signal and detectors, excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, or electrical inspection fees and will consider them incidental to this item of work. The Department will also not measure furnishing and connecting the induction of loop amplifiers, pedestrian isolators, load switches, model 400 modem card; furnishing and installing electrical service conductors, specified conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires and will consider them incidental to this item of work.

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Subsection: **Revision:**	723.04.20 Install Signal Controller - Type 170. Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed. The Department will not measure constructing the concrete base or mounting the cabinet to the pole, connecting the signal and detectors, and excavation, backfilling, restoration, any necessary pole mounting hardware, electric service, or electrical inspection fees and will consider them incidental to this item of work. The Department will also not measure connecting the induction loop amplifiers, pedestrian, isolators, load switches, model 400 modem card; furnishing and installing electrical service conductors, specified conduits, anchors, meter base, fused cutout, fuses, ground rods, ground wires and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.22 Remove Signal Equipment. Replace the paragraph with the following: The Department will measure the quantity as a lump sum removal of signal equipment. The Department will not measure the return of control equipment and signal heads to the Department of Highways as directed by the District Traffic Engineer. The Department also will not measure the transportation of materials of the disposal of all other equipment and materials off the project by the contractor and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.28 Install Pedestrian Detector Audible. Replace the second sentence with the following: The Department will not measure installing sign R10-3e (with arrow) and will consider it incidental to this item of work.
Subsection: **Revision:**	723.04.29 Audible Pedestrian Detector. Replace the second sentence with the following: The Department will not measure furnishing and installing the sign R10-3e (with arrow) and will consider it incidental to this item of work.
Subsection: **Revision:**	723.04.30 Bore and Jack Conduit. Replace the paragraph with the following: The Department will measure the quantity in linear feet. This item shall include all work necessary for boring and installing conduit under an existing roadway. Construction methods shall be in accordance with Sections 706.03.02, paragraphs 1, 2, and 4.
Subsection: **Revision:**	723.04.31 Install Pedestrian Detector. Replace the paragraph with the following: The Department will measure the quantity as each individual unit installed and connected to pole/pedestal. The Department will not measure installing sign R 10-3e (with arrow) and will consider it incidental to this item of work.
Subsection: **Revision:**	723.04.32 Install Mast Arm Pole. Replace the second sentence with the following: The Department will not measure arms, signal mounting brackets, anchor bolts, or any other necessary hardware and will consider them incidental to this item of work.
Subsection: **Revision:**	723.04.33 Pedestal Post. Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, conduit, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

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Subsection: 723.04.36 Traffic Signal Pole Base.
Revision: Replace the second sentence with the following: The Department will not measure excavation, reinforcing steel, anchor bolts, specified conduits, ground rods, ground wires, backfilling, or restoration and will consider them incidental to this item of work.

Subsection: 723.04.37 Install Signal Pedestal.
Revision: Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, specified conduits, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

Subsection: 723.04.38 Install Pedestal Post.
Revision: Replace the second sentence with the following: The Department will not measure excavation, concrete, reinforcing steel, anchor bolts, specified conduits, fittings, ground rod, ground wire, backfilling, restoration, or any other necessary hardware and will consider them incidental to this item of work.

Subsection: 723.05 PAYMENT.
Revision: Replace items 04810-04811, 20391NS835 and, 20392NS835 under Code, Pay Item, and Pay Unit with the following:

Code	Pay Item	Pay Unit
04810	Electrical Junction Box	Each
04811	Electrical Junction Box Type B	Each
20391NS835	Electrical Junction Box Type A	Each
20392NS835	Electrical Junction Box Type C	Each

Subsection: 804.01.02 Crushed Sand.
Revision: Delete last sentence of the section.

Subsection: 804.01.06 Slag.
Revision: Add subsection and following sentence.
Provide blast furnace slag sand where permitted. The Department will allow steel slag sand only in asphalt surface applications.

Subsection: 804.04 Asphalt Mixtures.
Revision: Replace the subsection with the following:
Provide natural, crushed, conglomerate, or blast furnace slag sand, with the addition of filler as necessary, to meet gradation requirements. The Department will allow any combination of natural, crushed, conglomerate or blast furnace slag sand when the combination is achieved using cold feeds at the plant. The Engineer may allow other fine aggregates.

Subsection: 806.03.01 General Requirements.
Revision: Replace the second sentence of the paragraph with the following:
Additionally, the material must have a minimum solubility of 99.0 percent when tested according to AASHTO T 44 and PG 76-22 must exhibit a minimum recovery of 60 percent, with a J_{NR} (nonrecoverable creep compliance) between 0.1 and 0.5, when tested according to AASHTO TP 70.

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Subsection: 806.03.01 General Requirements.
Table: PG Binder Requirements and Price Adjustment Schedule
Revision: Replace the Elastic Recovery, % [3] (AASHTO T301) and all corresponding values in the table with the following:

Test	Specification	100% Pay	90% Pay	80% Pay	70% Pay	50%Pay[1]
MSCR recovery, % [3] (AASHTO TP 70)	60 Min.	≥58	56	55	54	<53

Subsection: 806.03.01 General Requirements.
Table: PG Binder Requirements and Price Adjustment Schedule
Superscript: (3)
Revision: Replace [3] with the following:
Perform testing at 64°C.

Subsection: 813.04 Gray Iron Castings.
Revision: Replace the reference to "AASHTO M105" with "ASTM A48".

Subsection: 813.09.02 High Strength Steel Bolts, Nuts, and Washers.
Number: A) Bolts.
Revision: Delete first paragraph and "Hardness Number" Table. Replace with the following:
A) Bolts. Conform to ASTM A325 (AASHTO M164) or ASTM A490 (AASHTO 253) as applicable.

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Third paragraph, replace the reference to "AWPA C14" with "AWPA U1, Section B, Paragraph 4.1".

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Replace the first sentence of the fourth paragraph with the following:
Use any of the species of wood for round or square posts covered under AWPA U1.

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Fourth paragraph, replace the reference to "AWPA C2" with "AWPA U1, Section B, Paragraph 4.1".

Subsection: 814.04.02 Timber Guardrail Posts.
Revision: Delete the second sentence of the fourth paragraph.

Subsection: 814.05.02 Composite Plastic.
Revision: 1) Add the following to the beginning of the first paragraph: Select composite offset blocks conforming to this section and assure blocks are from a manufacturer included on the Department's List of Approved Materials.
2) Delete the last paragraph of the subsection.

Subsection: 816.07.02 Wood Posts and Braces.
Revision: First paragraph, replace the reference to "AWPA C5" with "AWPA U1, Section B, Paragraph 4.1".

Subsection: 816.07.02 Wood Posts and Braces.
Revision: Delete the second sentence of the first paragraph.

Subsection: 818.07 Preservative Treatment.
Revision: First paragraph, replace all references to "AWPA C14" with "AWPA U1, Section A".

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Subsection: **Revision:**	834.14 Lighting Poles. Replace the first sentence with the following: Lighting pole design shall be in accordance with loading and allowable stress requirements of the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims, with the exception of the following: The Cabinet will waive the requirement stated in the first sentence of Section 5.14.6.2 – Reinforced Holes and Cutouts for high mast poles (only). The minimum diameter at the base of the pole shall be 22 inches for high mast poles (only).
Subsection **Revision:**	834.14.03 High Mast Poles. Remove the second and fourth sentence from the first paragraph.
Subsection **Revision:**	834.14.03 High Mast Poles. Replace the third paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection: **Revision:**	834.14.03 High Mast Poles. Replace paragraph six with the following: Provide a pole section that conforms to ASTM A 595 grade A with a minimum yield strength of 55 KSI or ASTM A 572 with a minimum yield strength of 55 KSI. Use tubes that are round or 16 sided with a four inch corner radius, have a constant linear taper of .144 in/ft and contain only one longitudinal seam weld. Circumferential welded tube butt splices and laminated tubes are not permitted. Provide pole sections that are telescopically slip fit assembled in the field to facilitate inspection of interior surface welds and the protective coating. The minimum length of the telescopic slip splices shall be 1.5 times the inside diameter of the exposed end of the female section. Use longitudinal seam welds as commended in Section 5.15 of the AASHTO 2013 Specifications. The thickness of the transverse base shall not be less than 2 inches. Plates shall be integrally welded to the tubes with a telescopic welded joint or a full penetration groove weld with backup bar. The handhole cover shall be removable from the handhole frame. One the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM A 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7-guage stainless steel to provide adjustability to insure weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube of the pole but needs to be at least 15 inches. Provide products that are hot-dip galvanized to the requirements of either ASTM A123 (fabricated products) or ASTM A 153 (hardware items).
Subsection: **Revision:**	834.16 ANCHOR BOLTS. Insert the following sentence at the beginning of the paragraph: The anchor bolt design shall follow the NCHRP Report 494 Section 2.4 and NCHRP 469 Appendix A Specifications.

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Subsection: **Revision:**	834.17.01 Conventional. Add the following sentence after the second sentence: Provide a waterproof sticker mounted on the bottom of the housing that is legible from the ground and indicates the wattage of the fixture by providing the first two numbers of the wattage.
Subsection: **Revision:**	834.21.01 Waterproof Enclosures. Replace the last five sentences in the second paragraph with the following sentences: Provide a cabinet door with a louvered air vent, filter-retaining brackets and an easy to clean metal filter. Provide a cabinet door that is keyed with a factory installed standard no. 2 corbin traffic control key. Provide a light fixture with switch and bulb. Use a 120-volt fixture and utilize a L.E.D. bulb (equivalent to 60 watts minimum). Fixture shall be situated at or near the top of the cabinet and illuminate the contents of the cabinet. Provide a 120 VAC GFI duplex receptacle in the enclosure with a separate 20 amp breaker.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the first sentence of the first paragraph with the following: Pole diameter and wall thickness shall be calculated in accordance with the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection: **Revision:**	835.07 Traffic Poles. *Replace the first sentence of the fourth paragraph with the following: Ensure transverse plates have a thickness ≥ 2 inches. *Add the following sentence to the end of the fourth paragraph: The bottom pole diameter shall not be less than 16.25 inches.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the third sentence of the fifth paragraph with the following: For anchor bolt design, pole forces shall be positioned in such a manner to maximize the force on any individual anchor bolt regardless of the actual anchor bolt orientation with the pole.
Subsection: **Revision:**	835.07 Traffic Poles. Replace the first and second sentence of the sixth paragraph with the following: The pole handhole shall be 25 inches by 6.5 inches. The handhole cover shall be removable from the handhole frame. On the frame side opposite the hinge, provide a mechanism on the handhole cover/frame to place the Department's standard padlock as specified in Section 834.25. The handhole frame shall have two stainless studs installed opposite the hinge to secure the handhole cover to the frame which includes providing stainless steel wing nuts and washers. The handhole cover shall be manufactured from 0.25 inch thick galvanized steel (ASTM 153) and have a neoprene rubber gasket that is permanently secured to the handhole frame to insure weather-tight protection. The hinge shall be manufactured from 7 gauge stainless steel to provide adjustability to insure a weather-tight fit for the cover. The minimum clear distance between the transverse plate and the bottom opening of the handhole shall not be less than the diameter of the bottom tube but needs to be at least 12 inches.

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Subsection:	835.07 Traffic Poles.
Revision:	*Replace the first sentence of the last paragraph with the following: Provide calculations and drawings that are stamped by a Professional Engineer licensed in the Commonwealth of Kentucky. *Replace the third sentence of the last paragraph with the following: All tables referenced in 835.07 are found in the AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 2013-6th Edition with current interims.
Subsection:	835.07.01 Steel Strain Poles.
Revision:	Replace the second sentence of the second paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection:	835.07.01 Steel Strain Poles.
Revision:	Replace number 7. after the second paragraph with the following: 7. Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.
Subsection:	835.07.02 Mast Arm Poles.
Revision:	Replace the second sentence of the fourth paragraph with the following: The detailed analysis shall be certified by a Professional Engineer licensed in the Commonwealth of Kentucky.
Subsection:	835.07.02 Mast Arm Poles.
Revision:	Replace number 7) after the fourth paragraph with the following: 7) Fatigue calculations should be shown for all fatigue related connections. Provide the corresponding detail, stress category and example from table 11.9.3.1-1.
Subsection:	835.07.03 Anchor Bolts.
Revision:	Add the following to the end of the paragraph: There shall be two steel templates (one can be used for the headed part of the anchor bolt when designed in this manner) provided per pole. Templates shall be contained within a 26.5 inch diameter. All templates shall be fully galvanized (ASTM A 153).
Subsection:	835.16.05 Optical Units.
Revision:	Replace the 3rd paragraph with the following: The list of certified products can be found on the following website: http://www.intertek.com.
Subsection:	835.19.01 Pedestrian Detector Body.
Revision:	Replace the first sentence with the following: Provide a four holed pole mounted aluminum rectangular housing that is compatible with the pedestrian detector.
Subsection:	843.01.01 Geotextile Fabric.
Table:	TYPE I FABRIC GEOTEXTILES FOR SLOPE PROTECTION AND CHANNEL LINING
Revision:	Add the following to the chart:

Property	Minimum Value[(1)]	Test Method
CBR Puncture (lbs)	494	ASTM D6241
Permittivity (1/s)	0.7	ASTM D4491

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Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE II FABRIC GEOTEXTILES FOR UNDERDRAINS
Revision: Add the following to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	210	ASTM D6241
Permittivity (1/s)	0.5	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE III FABRIC GEOTEXTILES FOR SUBGRADE OR EMBANKMENT STABILIZATION
Revision: Add the following to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	370	ASTM D6241
Permittivity (1/s)	0.05	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE IV FABRIC GEOTEXTILES FOR EMBANKMENT DRAINAGE BLANKETS AND PAVEMENT EDGE DRAINS
Revision: Add the following to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	309	ASTM D6241
Permittivity (1/s)	0.5	ASTM D4491

Subsection: 843.01.01 Geotextile Fabric.
Table: TYPE V HIGH STRENGTH GEOTEXTILE FABRIC
Revision: Make the following changes to the chart:

Property	Minimum Value[1]	Test Method
CBR Puncture (lbs)	618	ASTM D6241
Grab Strength (lbs)	700	ASTM D4632
Apparent Opening Size	U.S. #40[3]	ASTM D4751

[3] Maximum average roll value.

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SPECIAL NOTE FOR PORTABLE CHANGEABLE MESSAGE SIGNS

This Special Note will apply when indicated on the plans or in the proposal.

1.0 DESCRIPTION. Furnish, install, operate, and maintain variable message signs at the locations shown on the plans or designated by the Engineer. Remove and retain possession of variable message signs when they are no longer needed on the project.

2.0 MATERIALS.

2.1 General. Use LED Variable Message Signs Class I, II, or III, as appropriate, from the Department's List of Approved Materials.

Unclassified signs may be submitted for approval by the Engineer. The Engineer may require a daytime and nighttime demonstration. The Engineer will make a final decision within 30 days after all required information is received.

2.2 Sign and Controls. All signs must:

1) Provide 3-line messages with each line being 8 characters long and at least 18 inches tall. Each character comprises 35 pixels.
2) Provide at least 40 preprogrammed messages available for use at any time. Provide for quick and easy change of the displayed message; editing of the message; and additions of new messages.
3) Provide a controller consisting of:
   a) Keyboard or keypad.
   b) Readout that mimics the actual sign display. (When LCD or LCD type readout is used, include backlighting and heating or otherwise arrange for viewing in cold temperatures.)
   c) Non-volatile memory or suitable memory with battery backup for storing pre-programmed messages.
   d) Logic circuitry to control the sequence of messages and flash rate.
4) Provide a serial interface that is capable of supporting complete remote control ability through land line and cellular telephone operation. Include communication software capable of immediately updating the message, providing complete sign status, and allowing message library queries and updates.
5) Allow a single person easily to raise the sign to a satisfactory height above the pavement during use, and lower the sign during travel.
6) Be Highway Orange on all exterior surfaces of the trailer, supports, and controller cabinet.
7) Provide operation in ambient temperatures from -30 to + 120 degrees Fahrenheit during snow, rain and other inclement weather.
8) Provide the driver board as part of a module. All modules are interchangeable, and have plug and socket arrangements for disconnection and reconnection. Printed circuit boards associated with driver boards have a conformable coating to protect against moisture.
9) Provide a sign case sealed against rain, snow, dust, insects, etc. The lens is UV stabilized clear plastic (polycarbonate, acrylic, or other approved material) angled to prevent glare.
10) Provide a flat black UV protected coating on the sign hardware, character PCB, and appropriate lens areas.
11) Provide a photocell control to provide automatic dimming.

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12) Allow an on-off flashing sequence at an adjustable rate.
13) Provide a sight to aim the message.
14) Provide a LED display color of approximately 590 nm amber.
15) Provide a controller that is password protected.
16) Provide a security device that prevents unauthorized individuals from accessing the controller.
17) Provide the following 3-line messages preprogrammed and available for use when the sign unit begins operation:

/KEEP/RIGHT/⇒⇒⇒/
/KEEP/LEFT/⇐⇐⇐/
/LOOSE/GRAVEL/AHEAD/
/RD WORK/NEXT/**MILES/
/TWO WAY/TRAFFIC/AHEAD/
/PAINT/CREW/AHEAD/
/REDUCE/SPEED/**MPH/
/BRIDGE/WORK/***0 FT/
/MAX/SPEED/**MPH/
/SURVEY/PARTY/AHEAD/
/MIN/SPEED/**MPH/
/ICY/BRIDGE/AHEAD/ /ONE LANE/BRIDGE/AHEAD/
/ROUGH/ROAD/AHEAD/
/MERGING/TRAFFIC/AHEAD/
/NEXT/***/MILES/
/HEAVY/TRAFFIC/AHEAD/
/SPEED/LIMIT/**MPH/
/BUMP/AHEAD/
/TWO/WAY/TRAFFIC/

*Insert numerals as directed by the Engineer.
Add other messages during the project when required by the Engineer.

2.3 Power.

1) Design solar panels to yield 10 percent or greater additional charge than sign consumption. Provide direct wiring for operation of the sign or arrow board from an external power source to provide energy backup for 21 days without sunlight and an on-board system charger with the ability to recharge completely discharged batteries in 24 hours.

3.0 CONSTRUCTION. Furnish and operate the variable message signs as designated on the plans or by the Engineer. Ensure the bottom of the message panel is a minimum of 7 feet above the roadway in urban areas and 5 feet above in rural areas when operating. Use Class I, II, or III signs on roads with a speed limit less than 55 mph. Use Class I or II signs on roads with speed limits 55 mph or greater.

Maintain the sign in proper working order, including repair of any damage done by others, until completion of the project. When the sign becomes inoperative, immediately repair or replace the sign. Repetitive problems with the same unit will be cause for rejection and replacement.

Use only project related messages and messages directed by the Engineer, unnecessary messages lessen the impact of the sign. Ensure the message is displayed in either one or 2 phases with each phase having no more than 3 lines of text. When no message is needed, but it is necessary to know if the sign is operable, flash only a pixel.

When the sign is not needed, move it outside the clear zone or where the Engineer directs. Variable Message Signs are the property of the Contractor and shall be removed from the project when no longer needed. The Department will not assume ownership of these signs.

4.0 MEASUREMENT. The final quantity of Variable Message Sign will be

1I

the actual number of individual signs acceptably furnished and operated during the project. The Department will not measure signs replaced due to damage or rejection.

5.0 PAYMENT. The Department will pay for the Variable Message Signs at the unit price each. The Department will not pay for signs replaced due to damage or rejection. Payment is full compensation for furnishing all materials, labor, equipment, and service necessary to, operate, move, repair, and maintain or replace the variable message signs. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
02671	Portable Changeable Message Sign	Each

Effective June 15, 2012

11J

SPECIAL NOTE FOR FULL DEPTH CONCRETE PAVEMENT REPAIR

This Special Note applies to full depth repairs of concrete pavement. Section references herein are to the Department's 2012 Standard Specifications for Road and Bridge Construction.

1.0 DESCRIPTION. Remove and replace concrete pavement. Comply with the applicable Standard Drawings and the Standard Specifications except as specifically superseded herein.

2.0 MATERIALS AND EQUIPMENT.

2.1 JPC Pavement. Test concrete materials according to section 601.03.03. Conform to 501, 502, and 601 except that the concrete must achieve 3000 psi in accordance with Section 4.4 of this note. The Engineer may allow pavement to be opened to traffic at less than 3,000 psi subject to the deductions described in Section 4.4 of this note.

2.2 Dowel Bars and Sleeves. Conform to 811.

2.3 Tie Bars. Conform to Section 811. Use epoxy coated tie bars in longitudinal and transverse joints.

2.4 Joint Sealants. Conform to Subsection 807.03.01 or 807.03.05.

2.5 Grout Adhesives and Epoxy Resin Systems. Conform to Section 826.

2.6 Dense Graded Aggregate (DGA) and Crushed Stone Base (CSB). Conform to Section 805.

2.7 Geotextile Fabric. Conform to Section 843.

2.8 Drills. Drill holes using a gang drill, capable of drilling a minimum of four simultaneously. Misalignment of holes shall not exceed 1/4 inch in the vertical or oblique plane.

2.9 Hammers. Only use chisel point hammers weighing less than 40 pounds to remove deteriorated concrete.

3.0 CONSTRUCTION.

3.1 Removal of Existing Pavement. Remove existing pavement to the extent the Contract specifies or as the Engineer directs. The minimum length of patches measured along centerline is 3 feet on each side of an existing joint.

When working with pavements with non-skewed transverse joints, if it is necessary to remove existing pavement closer than 6 feet to a transverse joint, remove the pavement 3 feet beyond that joint .

When working with pavements with skewed transverse joints, if it is necessary to remove existing pavement closer than 3 feet to a transverse joint, remove the pavement 3 feet beyond that joint.

Details of configurations of pavement and joints for various situations are depicted in the drawings herein.

When small areas of removal and replacement are performed at bridge ends, maintain or reconstruct existing expansion joints at their existing location. When the Engineer determines extensive full width removal and replacement is required, construct new expansion joints at the locations shown on Standard Drawing No. RPN-010.

In the removal operation, make a full depth saw cut longitudinally along the centerline joint and shoulder joint and transversely along the area marked for removal. To prevent damage to the subbase, do not allow the saw to penetrate more than ½" into the subbase. The Engineer may direct or approve additional cuts within the removal area for ease of removal of the damaged slab and to prevent damage to adjacent pavement to remain in place. Do not overcut beyond the limits of the removal area. Prevent saw slurry from entering existing joints and cracks. To avoid pumping and erosion beneath the slab, do not allow traffic on sawed pavement for more than 48 hours before beginning removal procedures, unless directed by the Engineer.

Lift out the deteriorated concrete vertically with lift pins. If approved by the Engineer, use other methods that do not damage the base, shoulder, or sides of pavement that is to be left in place. If any damage does occur, repair as the Engineer directs and use an acceptable alternative method for the removal process. Do not damage the pavement base during these operations.

3.2 Pavement Replacement. Do not damage the pavement base during these operations.

3.2.1 Preparation of Base. Compact the new and existing aggregate base to the Engineer's satisfaction. The Engineer will accept compaction by either visual inspection or by nuclear gauge. When the Engineer deems it necessary to stabilize the existing base or replace unsuitable materials, excluding bridge ends, use 12 inches of geotextile fabric wrapped No. 2 aggregate topped with 4 inches of DGA or CSB. Use either Type III or Type IV geotextile fabric. Flowable fill and cement stabilization may be used as an alternative to stabilize the existing base or to replace unsuitable materials when a plan for such is presented to and approved by the Engineer. The Engineer may also direct using only DGA or CSB to correct base deficiencies. At bridge ends, treat existing base and subgrade as the Contract specifies. During compaction, wet the base as the Engineer directs. Compact areas not accessible to compaction equipment by hand tamping.

3.2.2 Underdrains. Construct, or repair damage to, pavement edge drains according to Section 704. If underdrains are placed omitting areas to be patched, construct additional lateral drains as necessary to provide outlets for the installed underdrain until performing the pavement replacement and completing the underdrain system. Provide drainage for any undercut or base repair areas.

3.2.3 Pavement Replacement. Using load transfer assemblies for dowel joints drill into the existing slab according to the details shown herein and on the Standard Drawings.

Use plain epoxy coated dowels of the size specified on the standard drawings based on the pavement thickness for contraction and expansion joints.

Drill holes for dowel bars and tie bars into the face of the existing slab, at a diameter as specified in the following. Drill the dowel bar holes and tie bar

holes to a depth equal to 1/2 the length of the bars. Anchor tie bars into the existing pavement using an epoxy resin. Anchor dowel bars into the existing pavement using either an epoxy resin or an adhesive grout. For tie bars and dowel bars where an epoxy resin is to be used drill the holes 1/8 inch larger than the bar diameter. For dowel bars where an adhesive grout product is to be used, drill holes 1/4 inch larger than the bar diameter. Use a clear or opaque grout retention disk in both grout and epoxy applications. Operate the equipment to prevent damage to the pavement being drilled. Obtain the Engineer's approval of the drilling procedure. Install load transfer assemblies according to the Standard Drawings and Standard Specifications.

When indicated herein or in the Standard Drawings, use 1 inch deformed tie bars, 18 inches long on 30-inch centers and starting and ending 20 inches inside the edges of the repair area in the longitudinal joint. Use 1 inch deformed tie bars, or plain epoxy coated dowel bars sized in accordance with the Standard Drawings, 18 inches long beginning 12 inches inside of each edge and on 12-inch centers in transverse construction joints.

Install the dowels and tie bars according to Section 511 unless contradicted here. Ensure the holes are dry and free of dust and debris. Use a nozzle to insert the grout or epoxy starting at the back of the drilled hole to allow for full coating of the dowel or tie bar. After placement, use a bond breaker on the section of the dowel bar that is protruding from the hole.

Mix, place, finish, and cure concrete according to Section 501 with the exception that the Department will allow truck mixing, 2-bag mixers, and hand finishing.

When required, use a form on the side of the slab at longitudinal joints. When the adjacent traffic lane is not closed to traffic or the drop-off is not protected, temporarily fill the space between the form and the adjacent pavement with DGA. After placing the slab, remove the DGA and form. Fill the hole with concrete and thoroughly consolidate by rodding, spading, and sufficient vibration to form a dense homogeneous mass. Use a form on the side of the slab adjacent to shoulders. Excavate and backfill as shown on Section F'-F'.

For patches less than 25 feet in length, use a bond breaker and do not install tie bars at the longitudinal joint. Bond breakers should not exceed 1/8 inch in thickness, e.g. tar paper.

When resurfacing is required, a float finish is satisfactory. Otherwise, broom finish or, when the adjacent surface has a grooved finish, texture the surface according to Subsection 501.03.13 H). Finish the surface, including joints, to meet a surface tolerance of 1/8 inch in 10 feet that will be verified by straightedge. Cure the pavement and apply curing membranes according to 501.03.15.

Keep all pavement surfaces adjacent to this operation reasonably clean of excess grout and other materials at all times. Maintain all original longitudinal joints. Place transverse joints according to the details shown herein and on the Standard Drawings.

3.3 Joint Sealing. Seal all new or partially new joints with silicone rubber sealant or hot-poured elastic joint sealant according to Subsection 501.03.18.

4.0 MEASUREMENT.

4.1 Remove JPC Pavement. The Department will measure the quantity in square yards of surface area. The Department will not measure removal of

underlying base material for payment and will consider it incidental to Remove JPC Pavement.

4.2 DGA or CSB. The Department will not measure the quantity used to stabilize the existing base or to replace unsuitable material or to add fill material to achieve subgrade elevation. The Department will not measure removal of existing base material or underlying material for payment and will consider this work incidental to the bid item for JPC Pavement. The quantity of DGA used for the drop-off protection shall be incidental to this work and will not be measured for payment.

4.3 JPC Pavement Non-Reinforced. The Department will measure according to 501.04.01. The Department will not measure dowels, tie bars, or joint sealing for payment and will consider it incidental to Non-Reinforced JPC Pavement.

JPC Pavement will be paid according to section 5.0 below and according to the following payment schedule based on the compressive strength. The cylinders for payment will be tested two hours prior the scheduled opening of traffic.

3000 psi and up	100% payment
2750 to 3000 psi	75% payment and approval from the Engineer to open to traffic*
2500 to 2750 psi	50% payment and approval from the Engineer to open to traffic*
2250 to 2500 psi	25% payment and approval from the Engineer to open to traffic*
Below 2250 psi	10% payment and no potential to open to traffic. Maintain traffic closure until concrete reaches a minimum of 2250 psi.

*If the Engineer approves opening to traffic, the Engineer will evaluate the concrete at 28 days (or sooner) to determine if the removal and replacement of the concrete is necessary due to pavement distress induced by the early opening (i.e. noticeable cracking). If required by the Engineer, remove and replace those slabs showing distress at no cost to the Department.

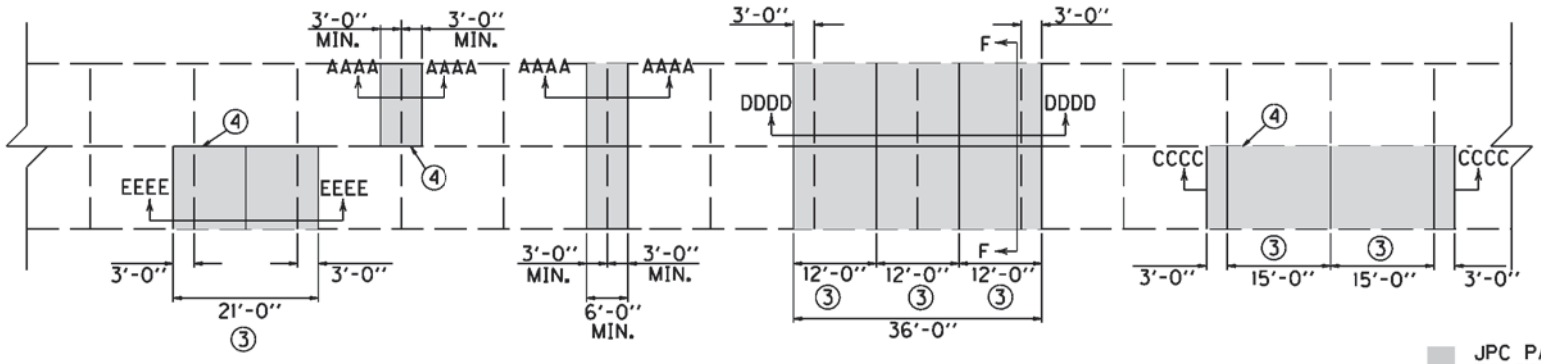
4.4 Underdrains. The Department will measure the quantity according to Subsection 704.04. The Department will not measure lateral drains for payment and will consider them incidental to the Underdrains.

5.0 PAYMENT. The Department will make payment for the completed and accepted quantities under the following:

Code	Pay Item	Pay Unit
----	Remove JPC Pavement	Square Yard
00001	DGA Base	Ton
00003	Crushed Stone Base	Ton
02069-02071, 02073, 02075, 02084, 02086, 02088	JPC Pavement Non-Reinforced, thickness	See Subsection 501.05
01000	Perforated Pipe, 4-inch	Linear Foot
02598, 02599	Fabric-Geotextile, Type	Square Yard

The Department will consider payment as full compensation for all work required in this provision.

June 15, 2012



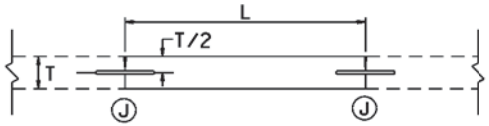
PLAN VIEW

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE TIE BARS FOR SECTION CCCC), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION CCCC) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.

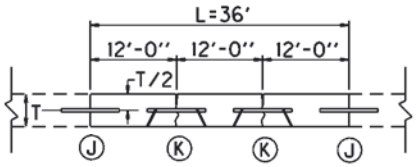
③ IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.

④ IF ONLY ONE LANE IS REMOVED, AND L>25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L≤25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.

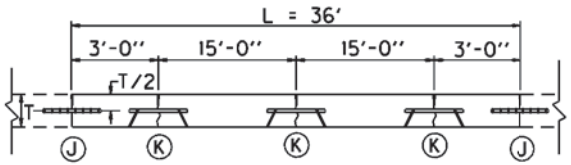
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION CCCC) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.



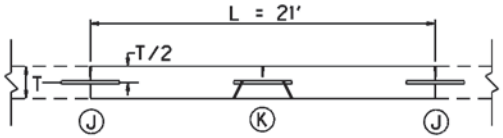
SECTION AAAA
JOINT REPLACEMENT



SECTION DDDD
FULL WIDTH REPLACEMENT
(INCLUDING JPC SHOULDERS)

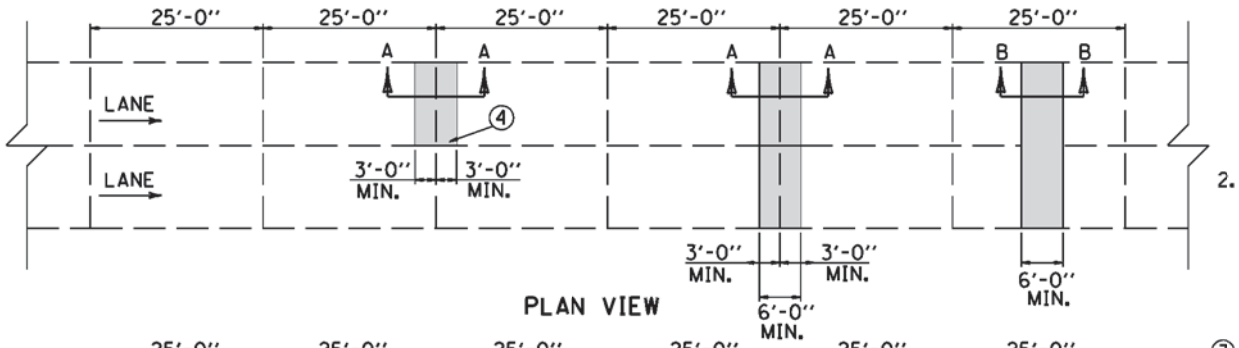


SECTION CCCC
LANE REPLACEMENT WHERE ADJACENT
LANES OR JPC SHOULDERS WILL REMAIN

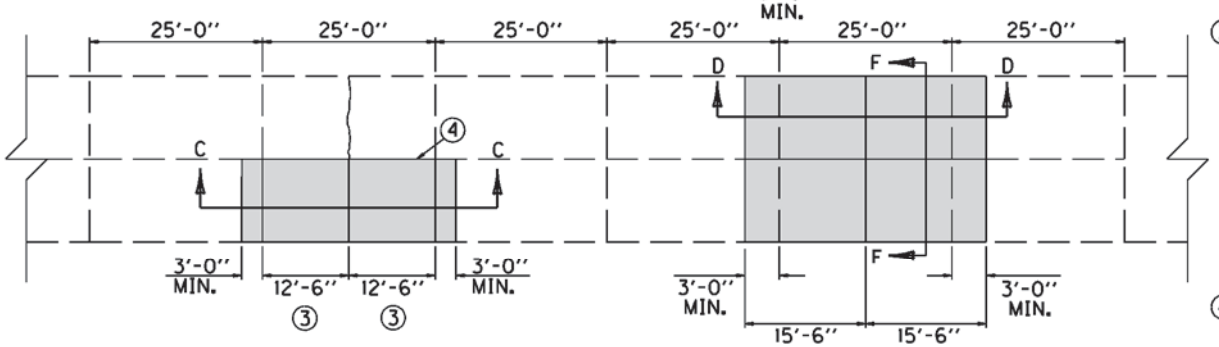


SECTION EEEE
LANE REPLACEMENT L≤25'

KENTUCKY DEPARTMENT OF HIGHWAYS
15' JOINT SPACING
APPROVED _____ TEBW DIVISION OF DESIGN _____ DATE



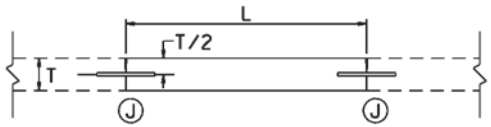
PLAN VIEW



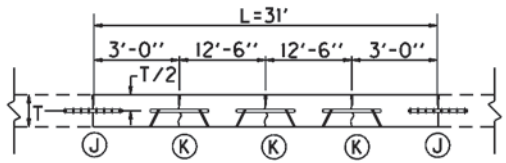
PLAN VIEW

JPC PAVEMENT TO BE REMOVED

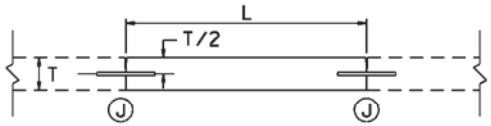
1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE TIE BARS FOR SECTION C), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION C) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION C) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L>25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L≤25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION C) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.



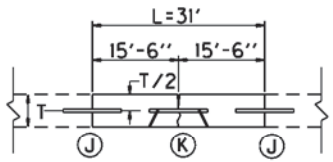
SECTION A
JOINT REPLACEMENT



SECTION C
LANE REPLACEMENT WHERE ADJACENT LANES OR JPC SHOULDERS WILL REMAIN



SECTION B
MID-SLAB REPLACEMENT

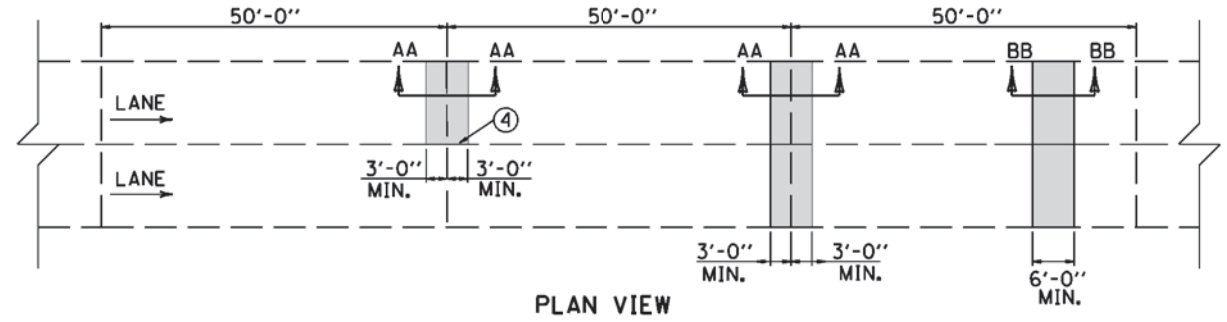


SECTION D
FULL WIDTH REPLACEMENT
(INCLUDING JPC SHOULDERS)

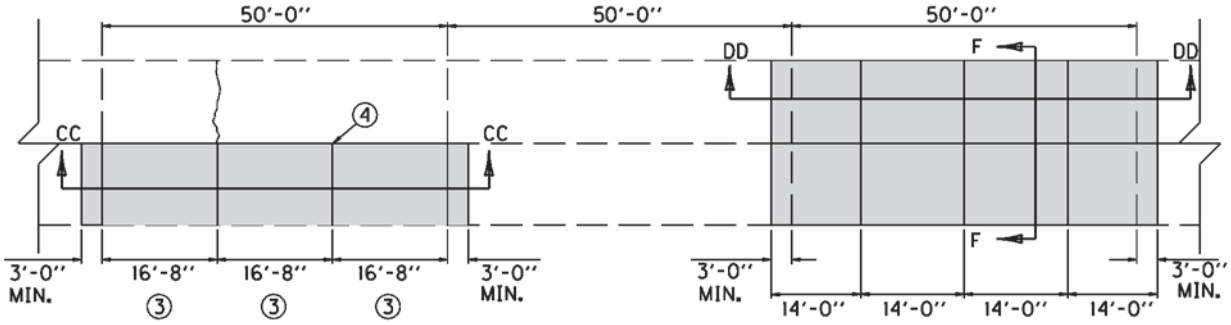
KENTUCKY DEPARTMENT OF HIGHWAYS

25' JOINT SPACING

APPROVED _____ TEBM DIVISION OF DESIGN _____ DATE

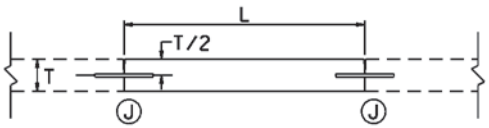


PLAN VIEW

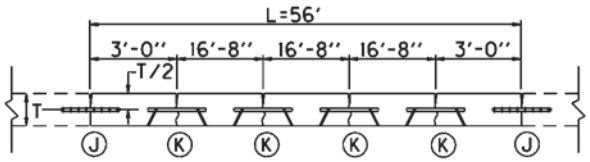


JPC PAVEMENT TO BE REMOVED

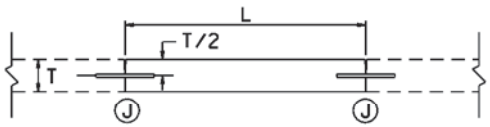
PLAN VIEW



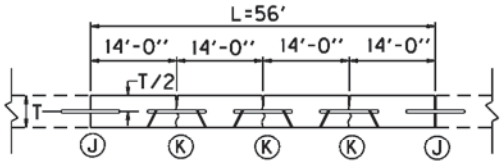
SECTION AA
JOINT REPLACEMENT



SECTION CC
LANE REPLACEMENT WHERE ADJACENT LANES OR JPC SHOULDERS WILL REMAIN



SECTION BB
MID-SLAB REPLACEMENT



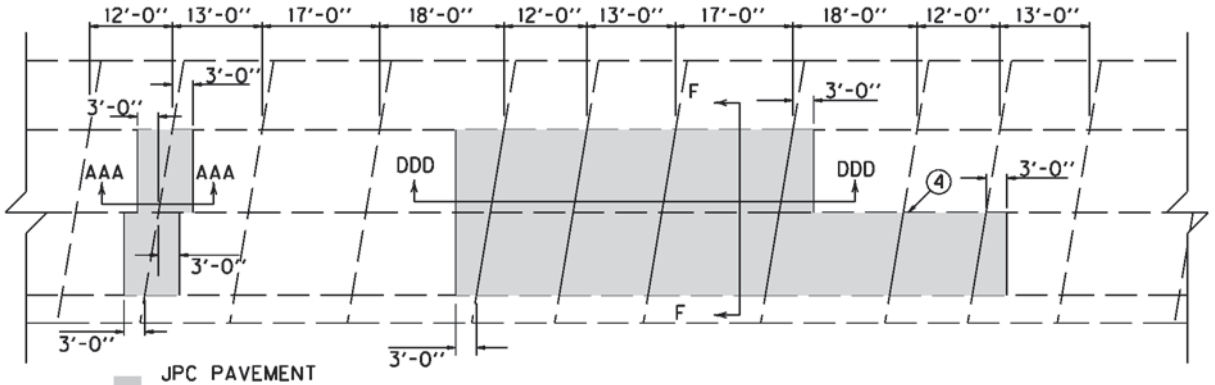
SECTION DD
FULL WIDTH REPLACEMENT
(INCLUDING JPC SHOULDERS)

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE TIE BARS FOR SECTION CC), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION CC) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION CC) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND CONSTRUCT CONTRACTION JOINTS SUCH THAT THE DISTANCE BETWEEN JOINTS IN THE REPLACED SECTION IS NO LESS THAN 10 FEET OR MORE THAN 20 FEET. TRANSVERSE JOINTS SHALL BE SPACED APPROXIMATELY 15' EQUIDISTANT, BUT NOT LESS THAN 10 FEET OR NO MORE THAN 20 FEET. ADJUST JOINTS TO PROVIDE THE MINIMUM NUMBER OF JOINTS WITHOUT EXCEEDING THE 10-20 FOOT RANGE. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH AN EXISTING JOINT OR CRACK IN THE ADJACENT SLAB IF ONLY ONE LANE IS BEING REPLACED.
4. IF ONLY ONE LANE IS REMOVED, AND L>25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L≤25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.
5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION CC) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

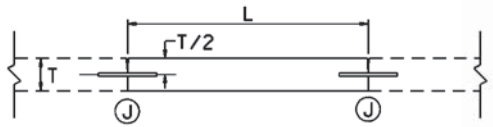
KENTUCKY DEPARTMENT OF HIGHWAYS

50' JOINT SPACING

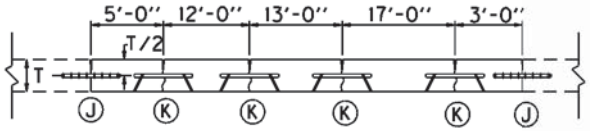
SUBMITTED _____ TEBM DIVISION OF DESIGN _____ DATE



PLAN VIEW



SECTION AAA
JOINT REPLACEMENT



SECTION DDD
LANE REPLACEMENT
(ALWAYS MATCH EXISTING JOINTS)

1. SAW AT LOCATIONS "J" AND ALONG LONGITUDINAL JOINT (IF ONLY ONE LANE IS REMOVED) FULL DEPTH WITHOUT DAMAGE TO EXISTING CONCRETE. SAW RELIEF JOINTS AS THE ENGINEER DIRECTS OR APPROVES. REMOVE THE EXISTING JPC PAVEMENT TO THE LENGTH AND AT THE LOCATIONS NOTED ELSEWHERE IN THE CONTRACT. L=6 FEET MINIMUM AND LOCATIONS "J" SHALL NOT BE CLOSER THAN 6 FEET TO ANY TRANSVERSE JOINT BEYOND THE REPAIR.
2. INSTALL SMOOTH, LOAD TRANSFER DOWELS (EXCEPT USE TIE BARS FOR SECTION DDD), 18 INCHES LONG (SEE STANDARD DRAWING NO. RPS-020 FOR DOWEL SIZE) AT LOCATIONS "J". INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) IN THE EXISTING CONCRETE USING EPOXY TYPE IV. INSTALL DOWELS (OR TIE BARS FOR SECTION DDD) ON 12 INCH CENTERS BEGINNING 12 INCHES FROM THE EDGE OF THE SLAB.
3. IF L IS GREATER THAN 20 FEET, INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND MATCH EXISTING JOINTS. INSTALL NEW LOAD TRANSFER ASSEMBLY(S) AND ALIGN LOAD TRANSFER ASSEMBLY(S) WITH EXISTING JOINTS IN ADJACENT SLABS.

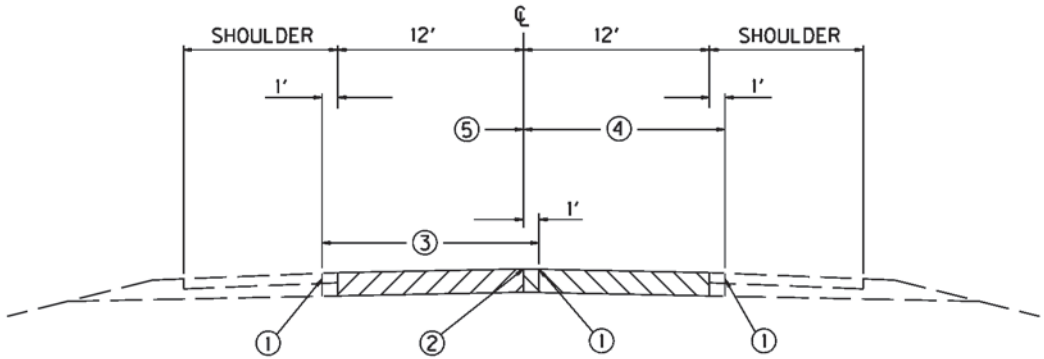
④ IF ONLY ONE LANE IS REMOVED, AND L>25', INSTALL NEW 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS IN THE LONGITUDINAL JOINT USING EPOXY TYPE IV. IF 2 OR MORE LANES ARE REMOVED, CONSTRUCT LONGITUDINAL JOINT(S) ACCORDING TO THE STANDARD DRAWING EXCEPT USE 1-INCH TIE BARS 18 INCHES LONG ON 30 INCH CENTERS. IF L≤25', DO NOT TIE THE LONGITUDINAL JOINT TO THE EXISTING LANE; USE A BOND BREAKER MATERIAL APPROVED BY THE ENGINEER THAT WILL ASSURE NO INTERACTION WITH THE ADJACENT LANE.

5. REPLACE WITH NON-REINFORCED JPC PAVEMENT AND INSTALL CONTRACTION JOINTS AT LOCATIONS "K" AND CONTRACTION JOINTS (OR A CONSTRUCTION JOINT FOR LOCATION DDD) AT LOCATIONS "J". SAW AND SEAL ALL JOINTS.
6. SEE "CROSS SECTION" FOR SECTION F.

KENTUCKY
DEPARTMENT OF HIGHWAYS

RANDOM SKEWED

APPROVED _____ TEBM DIVISION OF DESIGN _____ DATE



SECTION F

① SAW-CUT LINE. THIS ONE FOOT IS TO ALLOW FOR A FORM AND THE REMOVAL AND REPLACEMENT SHALL BE INCIDENTAL TO THE WORK, EXCEPT NEW ASPHALT MIXTURE SHALL BE PAID DIRECT ON A TONNAGE BASIS, AND NEW JPC PAVEMENT WILL BE PAID BY THE SQUARE YARD. COMPACT THE DGA BASE BY MECHANICAL TAMPERS TO THE ENGINEER'S SATISFACTION.

② EXISTING LONGITUDINAL JOINT.

③ FIRST SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.

④ SECOND SLAB REMOVAL LIMITS AND REPLACE 12-FOOT LANE.

⑤ THIS ONE FOOT IS TO ALLOW FOR A FORM ON THE FIRST POUR, AND A TEMPORARY PAVEMENT IS REQUIRED. THE DEPARTMENT WILL NOT REQUIRE REMOVAL OF THIS ONE FOOT IF THE GRADE OF THE EXISTING PAVEMENT IS ADEQUATE TO ENSURE THE NEW CONCRETE CAN BE PLACED AND FINISHED TO THE SATISFACTION OF THE ENGINEER. ANY TEMPORARY PAVEMENT IS INCIDENTAL TO JPC PAVEMENT.

6. THE ABOVE DRAWING DEPICTS THE ORDER OF SLAB REMOVAL WHEN BOTH ARE TO BE REMOVED AT THE SAME LOCATION. WHEN ONLY ONE SLAB OR LANE IS TO BE REMOVED, REMOVE AND REPLACE ACCORDING TO SECTION C, CC, OR CCCC. TRAFFIC CONTROL WILL SPECIFY WHICH LANE TO REMOVE FIRST.

KENTUCKY DEPARTMENT OF HIGHWAYS
CROSS SECTION
APPROVED _____ TEBM DIVISION OF DESIGN _____ DATE

2012 STANDARD DRAWINGS THAT APPLY

CURVE WIDENING AND SUPERELEVATION TRANSITIONS RGS-001-06
SUPERELEVATION FOR MULTILANE PAVEMENTS RGS-002-05
MISCELLANEOUS STANDARDS PART 1 ..... RGX-001-05
CURB AND GUTTER, CURBS AND VALLEY GUTTER RPM-100-09
APPROACHES, ENTRANCES, AND MAIL BOX TURNOUT RPM-110-06
NON-REINFORCED CONCRETE PAVEMENT RPN-015-04
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING RPN-020-03
CONCRETE PAVEMENT JOINT DETAILS RPS-010-10
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING RPS-030-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING RPS-031-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING RPS-032-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING RPS-033-06
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING RPS-034-06
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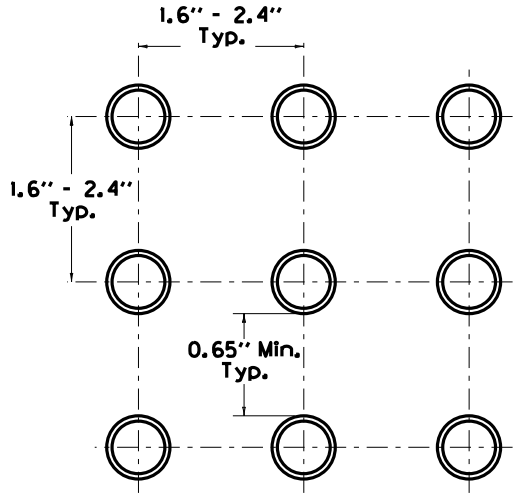
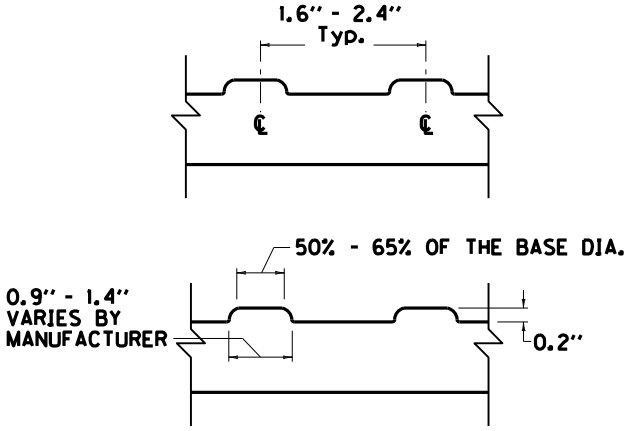
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING RPS-037-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING RPS-038-05
CONCRETE PAVEMENT JOINTS - TYPES AND SPACING RPS-039-05
HOT POURED ELASTIC JOINT SEALS FOR CONCRETE PAVEMENT RPX-015-03
PAVEMENT MARKER ARRANGEMENTS TWO-WAY LEFT TURN LANE TPM-140-02
LANE CLOSURE MULTI-LANE HIGHWAY CASE I TTC-115-02
LANE CLOSURE MULTI-LANE HIGHWAY CASE II TTC-120-02
SHOULDER CLOSURE TTC-135-01
POST SPLICING DETAIL TTD-110-01
PAVEMENT CONDITION WARNING SIGNS TTD-125-01
MOBILE OPERATION FOR PAINT STRIPING CASE III TTS-110-01
MOBILE OPERATION FOR PAINT STRIPING CASE IV TTS-115-01

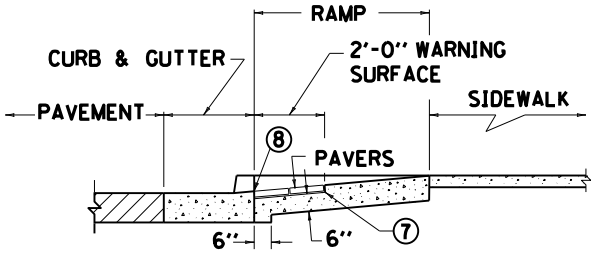
COUNTY OF	ITEM NO.	SHEET NO.



SQUARE PATTERN



CONCRETE PAVER PROFILE



TYPICAL CONCRETE
PAVER DETECTABLE
WARNING INSTALLATION

NOTES

BID ITEM AND UNIT TO BID.
DETECTABLE WARNINGS - SQ. FT.

1. LANDINGS WILL PROVIDE A LEVEL AREA (MAX. 2% GRADE OR CROSS SLOPE) AT APPROXIMATE STREET ELEVATION. A 4 FOOT SQUARE LEVEL LANDING IS THE REQUIRED MINIMUM.
2. DETECTABLE WARNINGS SHALL BE INSTALLED USING CONCRETE PAVERS IN ACCORDANCE WITH THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
3. JOINTS AROUND PAVERS SHALL BE FILLED WITH DRY MORTAR. MORTAR SHALL BE BRUSHED IN WITH A COURSE BROOM. SAND WILL NOT BE ALLOWED.
4. COMMERCIAL DRIVEWAYS WITH TRAFFIC CONTROL DEVICES REQUIRE ADA SIDEWALK TREATMENTS WITH DETECTABLE WARNINGS.
5. CONCRETE PAVERS SHALL BE CONCRETE WITH A MINIMUM THICKNESS OF 2".
6. CONCRETE PAVERS SHALL BE A COLOR HOMOGENOUS THROUGHOUT THE PAVER. THAT COLOR SHALL CONTRAST VISUALLY WITH THE ADJOINING SURFACES. EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE DEPARTMENT WILL ALLOW EITHER YELLOW OR RED AS COLORS.

⑦ CONCRETE PAVERS TO BE SET IN MORTAR.
⑧ DETECTABLE WARNING SURFACE BEGINS AT BACK OF CURB.

USE WITH CUR. STD. DWGS.
RPM-170, RPM-172

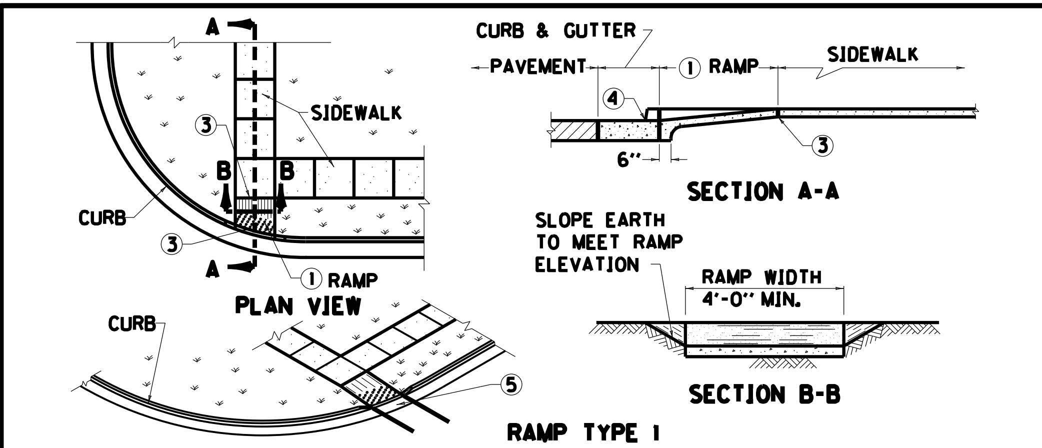
KENTUCKY
DEPARTMENT OF HIGHWAYS

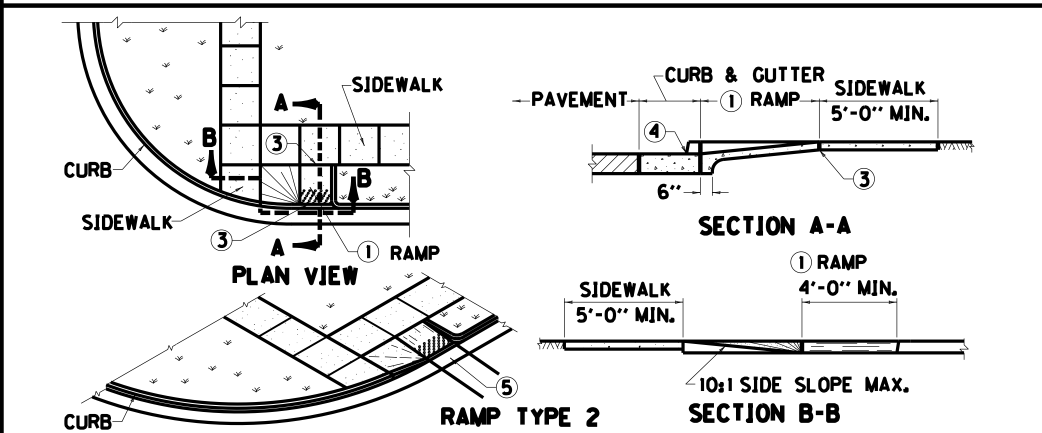
DETECTABLE WARNINGS

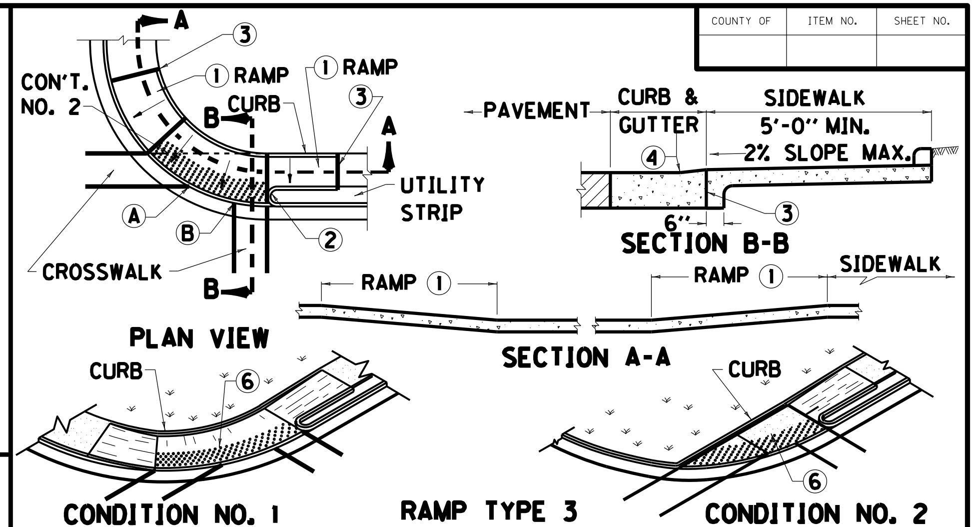
SUBMITTED William S Haskell 11-21-14
DATE

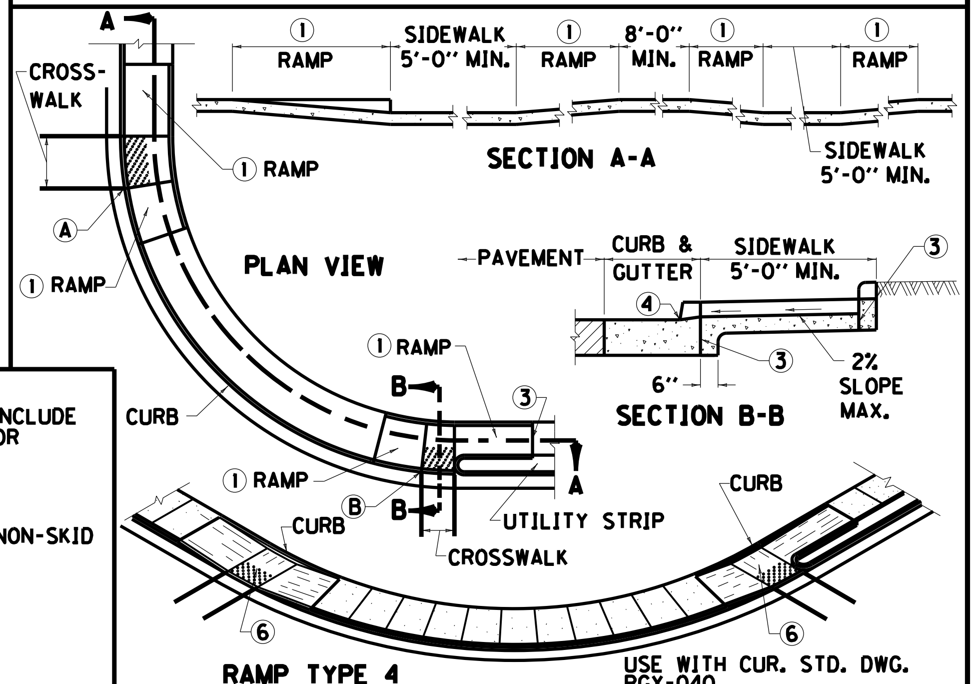
028

COUNTY OF	ITEM NO.	SHEET NO.









NOTES

RAMPS SHALL BE PAID PER SQ. YARD OF 4" CONC. SIDEWALK AND THE UNIT PRICE SHALL INCLUDE ALL MATERIALS, FORMS, CURB BEHIND RAMP AND LANDING, AND INCIDENTALS NECESSARY FOR CONSTRUCTION.

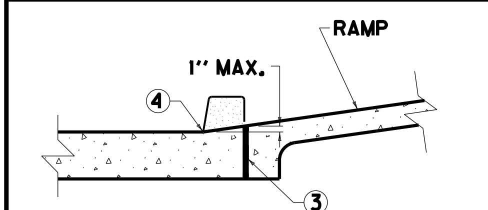
BID ITEM AND UNIT TO BID:
SIDEWALK-4 INCH CONCRETE - SQYD

THE RAMP SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED. DETECTABLE WARNINGS SHALL BE A SEPARATE BID ITEM.

THE NORMAL GUTTER LINE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.

RAMPS SHOULD BE LOCATED WITHIN MARKED LIMITS OF CROSSWALKS.
USE RAMP TYPE 3 WHEN POINT A TO B IS LESS THAN 20 FEET.
USE RAMP TYPE 4 WHEN POINT A TO B IS 20 FEET OR MORE.

1. CURB RAMP GRADE SHALL NOT EXCEED 12:1, CROSS SLOPE SHALL NOT EXCEED 2%. ON RETROFIT CURB RAMPS, GRADES OF 12.5% for 2'-0" OR 10% FOR 5'-0" ARE PERMISSABLE.
2. CURB RETURN REQUIRED WHEN UTILITY STRIP IS 4 FEET OR GREATER. FOR UTILITY STRIPS LESS THAN 4 FEET, THE AREA IS TO BE SURFACED WITH SIDEWALK WITHIN THE RAMP.
3. ½" EXPANSION JOINT AT BACK OF CURB LINE AND AT SIDEWALK LINE.
4. NO BUMP PERMITTED. SAME SLOPE AS RAMP AND NOT TO EXCEED 1" IN HEIGHT. RAMPS SHALL BE CONSTRUCTED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.
5. LANDINGS WILL PROVIDE A LEVEL AREA (MAX. 5% GRADE OR CROSS SLOPE) AT APPROXIMATE STREET ELEVATION. A 4 FOOT SQUARE LEVEL LANDING IS THE REQUIRED MINIMUM.
6. LANDINGS WILL PROVIDE A LEVEL AREA (MAX. 2% GRADE OR CROSS SLOPE) AT APPROXIMATE STREET ELEVATION. A 4 FOOT SQUARE LEVEL LANDING IS THE REQUIRED MINIMUM.



DROP CURB FOR RAMP

KENTUCKY
DEPARTMENT OF HIGHWAYS

SIDEWALK RAMPS

SUBMITTED [signature] 11-21-14
DATE

029

PART III

EMPLOYMENT, WAGE AND RECORD REQUIREMENTS

TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS

LABOR AND WAGE REQUIREMENTS
APPLICABLE TO OTHER THAN FEDERAL-AID SYSTEM PROJECTS

I. APPLICATION

1. These contract provisions shall apply to all work performed on the contract by the contractor with his own organization and with the assistance of workmen under his immediate superintendence and to all work performed on the contract by piecework, station work or by subcontract. The contractor's organization shall be construed to include only workmen employed and paid directly by the contractor and equipment owned or rented by him, with or without operators.

2. The contractor shall insert in each of his subcontracts all of the stipulations contained in these Required Provisions and such other stipulations as may be required.

3. A breach of any of the stipulations contained in these Required Provisions may be grounds for termination of the contract.

II. NONDISCRIMINATION OF EMPLOYEES

AN ACT OF THE KENTUCKY
GENERAL ASSEMBLY TO PREVENT
DISCRIMINATION IN EMPLOYMENT
KRS CHAPTER 344
EFFECTIVE JUNE 16, 1972

The contract on this project, in accordance with KRS Chapter 344, provides that during the performance of this contract, the contractor agrees as follows:

1. The contractor shall not fail or refuse to hire, or shall not discharge any individual, or otherwise discriminate against an individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy); or limit, segregate, or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, national origin, sex, disability or age (between forty and seventy). The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

2. The contractor shall not print or publish or cause to be printed or published a notice or advertisement relating to employment by such an employer or membership in or any classification or referral for employment by the employment agency, indicating any preference, limitation, specification, or discrimination, based on race, color, religion, national origin, sex, disability or age (between forty and seventy), except that such notice or advertisement may indicate a preference, limitation, or specification based on religion, or national origin when religion, or national origin is a bona fide occupational qualification for employment.

3. If the contractor is in control of apprenticeship or other training or retraining, including on-the-job training programs, he shall not discriminate against an individual because of his race, color, religion, national origin, sex, disability or age (between forty and seventy), in admission to, or employment in any program established to provide apprenticeship or other training.

4. The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment. The contractor will take such action with respect to any subcontract or purchase order as the administrating agency may direct as a means of enforcing such provisions, including sanctions for non-compliance.

III. PAYMENT OF PREDETERMINED MINIMUM WAGES

1. These special provisions are supplemented elsewhere in the contract by special provisions which set forth certain predetermined minimum wage rates. The contractor shall pay not less than those rates.

2. The minimum wage determination schedule shall be posted by the contractor, in a manner prescribed by the Department of Highways, at the site of the work in prominent places where it can be easily seen by the workers.

IV. STATEMENTS AND PAYROLLS

1. All contractors and subcontractors affected by the terms of KRS 337.505 to 337.550 shall keep full and accurate payroll records covering all disbursements of wages to their employees to whom they are required to pay not less than the prevailing rate of wages. Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of one (1) year from the date of completion of this contract.

2. The payroll records shall contain the name, address and social security number of each employee, his correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid.

3. The contractor shall make his daily records available at the project site for inspection by the State Department of Highways contracting office or his authorized representative.

Periodic investigations shall be conducted as required to assure compliance with the labor provisions of the contract. Interrogation of employees and officials of the contractor shall be permitted during working hours.

Aggrieved workers, Highway Managers, Assistant District Engineers, Resident Engineers and Project Engineers shall report all complaints and violations to the Division of Contract Procurement.

The contractor shall be notified in writing of apparent violations. The contractor may correct the reported violations and notify the Department of Highways of the action taken or may request an informal hearing. The request for hearing shall be in writing within ten (10) days after receipt of the notice of the reported violation. The contractor may submit

records and information which will aid in determining the true facts relating to the reported violations.

Any person or organization aggrieved by the action taken or the findings established as a result of an informal hearing by the Division of Contract Procurement may request a formal hearing.

4. The wages of labor shall be paid in legal tender of the United States, except that this condition will be considered satisfied if payment is made by a negotiable check, on a solvent bank, which may be cashed readily by the employee in the local community for the full amount, without discount or collection charges of any kind. Where checks are used for payments, the contractor shall make all necessary arrangements for them to be cashed and shall give information regarding such arrangements.

5. No fee of any kind shall be asked or accepted by the contractor or any of his agents from any person as a condition of employment on the project.

6. No laborers shall be charged for any tools used in performing their respective duties except for reasonably avoidable loss or damage thereto.

7. Every employee on the work covered by this contract shall be permitted to lodge, board, and trade where and with whom he elects and neither the contractor nor his agents, nor his employees shall directly or indirectly require as a condition of employment that an employee shall lodge, board or trade at a particular place or with a particular person.

8. Every employee on the project covered by this contract shall be an employee of either the prime contractor or an approved subcontractor.

9. No charge shall be made for any transportation furnished by the contractor or his agents to any person employed on the work.

10. No individual shall be employed as a laborer or mechanic on this contract except on a wage basis, but this shall not be construed to prohibit the rental of teams, trucks or other equipment from individuals.

No Covered employee may be employed on the work except in accordance with the classification set forth in the schedule mentioned above; provided, however, that in the event additional classifications are required, application shall be made by the contractor to the Department of Highways and (1) the Department shall request appropriate classifications and rates from the proper agency, or (2) if there is urgent need for additional classification to avoid undue delay in the work, the contractor may employ such workmen at rates deemed comparable to rates established for similar classifications provided he has made written application through the Department of Highways, addressed to the proper agency, for the supplemental rates. The contractor shall retroactively adjust, upon receipt of the supplemental rates schedule, the wages of any employee paid less than the established rate and may adjust the wages of any employee overpaid.

11. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic in any work-week in which he is employed on such work, to work in excess of eight hours in any calendar day or in excess of forty hours in such work-week unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all hours worked in excess of eight hours in any calendar day or in excess of forty hours in such work-week. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. This agreement shall be in writing and shall be executed prior to the employee working in excess of eight (8) hours, but not more than ten (10) hours, in any one (1) calendar day.

12. Payments to the contractor may be suspended or withheld due to failure of the contractor to pay any laborer or mechanic employed or working on the site of the work, all or part of the wages required under the terms of the contract. The Department may suspend or withhold payments only after the contractor has been given written notice of the alleged violation and the contractor has failed to comply with the wage determination of the Department of Highways.

13. Contractors and subcontractors shall comply with the sections of Kentucky Revised Statutes, Chapter 337 relating to contracts for Public Works.

Revised 2-16-95

EXECUTIVE BRANCH CODE OF ETHICS

In the 1992 regular legislative session, the General Assembly passed and Governor Brereton Jones signed Senate Bill 63 (codified as KRS 11A), the Executive Branch Code of Ethics, which states, in part:

KRS 11A.040 (6) provides:

No present or former public servant shall, within six (6) months of following termination of his office or employment, accept employment, compensation or other economic benefit from any person or business that contracts or does business with the state in matters in which he was directly involved during his tenure. This provision shall not prohibit an individual from returning to the same business, firm, occupation, or profession in which he was involved prior to taking office or beginning his term of employment, provided that, for a period of six (6) months, he personally refrains from working on any matter in which he was directly involved in state government. This subsection shall not prohibit the performance of ministerial functions, including, but not limited to, filing tax returns, filing applications for permits or licenses, or filing incorporation papers.

KRS 11A.040 (8) states:

A former public servant shall not represent a person in a matter before a state agency in which the former public servant was directly involved, for a period of one (1) year after the latter of:

a) The date of leaving office or termination of employment; or
b) The date the term of office expires to which the public servant was elected.

This law is intended to promote public confidence in the integrity of state government and to declare as public policy the idea that state employees should view their work as a public trust and not as a way to obtain private benefits.

If you have worked for the executive branch of state government within the past six months, you may be subject to the law's prohibitions. The law's applicability may be different if you hold elected office or are contemplating representation of another before a state agency.

Also, if you are affiliated with a firm which does business with the state and which employs former state executive-branch employees, you should be aware that the law may apply to them.

In case of doubt, the law permits you to request an advisory opinion from the Executive Branch Ethics Commission, Room 136, Capitol Building, 700 Capitol Avenue, Frankfort, Kentucky 40601; telephone (502) 564-7954.

Kentucky Equal Employment Opportunity Act of 1978

The requirements of the Kentucky Equal Employment Opportunity Act of 1978 (KRS 45.560-45.640) shall apply to this Contract. The apparent low Bidder will be required to submit EEO forms to the Division of Construction Procurement, which will then forward to the Finance and Administration Cabinet for review and approval. No award will become effective until all forms are submitted and EEO/CC has certified compliance. The required EEO forms are as follows:

- EEO-1: Employer Information Report
- Affidavit of Intent to Comply
- Employee Data Sheet
- Subcontractor Report

These forms are available on the Finance and Administration's web page under ***Vendor Information, Standard Attachments and General Terms*** at the following address: **https://www.eProcurement.ky.gov**.

Bidders currently certified as being in compliance by the Finance and Administration Cabinet may submit a copy of their approval letter in lieu of the referenced EEO forms.

For questions or assistance please contact the Finance and Administration Cabinet by email at **finance.contractcompliance@ky.gov** or by phone at 502-564-2874.

General Decision Number: KY150100 02/20/2015 KY100

Superseded General Decision Number: KY20140100

State: Kentucky

Construction Type: Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Executive Order (EO) 13658 establishes an hourly minimum wage of $10.10 for 2015 that applies to all contracts subject to the Davis-Bacon Act for which the solicitation is issued on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.10 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/02/2015
1	01/23/2015
2	01/30/2015
3	02/20/2015

BRIN0004-003 06/01/2011

BRECKENRIDGE COUNTY

	Rates	Fringes
BRICKLAYER	$ 24.11	10.07

BRKY0001-005 06/01/2014

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

	Rates	Fringes

BRICKLAYER.....$ 25.37 10.50

BRKY0002-006 06/01/2011

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 26.57	10.26

BRKY0007-004 06/01/2014

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 30.57	17.94

BRKY0017-004 06/01/2009

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
BRICKLAYER	$ 24.11	9.97

CARP0064-001 04/01/2014

	Rates	Fringes
CARPENTER	$ 27.50	14.96
Diver	$ 41.63	14.96
PILEDRIVERMAN	$ 27.75	14.96

ELEC0212-008 06/02/2014

BRACKEN, GALLATIN and GRANT COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 26.74	16.45

ELEC0212-014 07/01/2013

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician	$ 22.50	9.51

ELEC0317-012 05/28/2014

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes

ELECTRICIAN

Cable Splicer	$ 32.68	18.13
Electrician	$ 32.62	21.45

ELEC0369-007 05/28/2014

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL, CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT, SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 29.88	14.78

ELEC0575-002 06/02/2014

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN	$ 31.70	14.21

ENGI0181-018 07/01/2014

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1	$ 28.85	14.15
GROUP 2	$ 26.24	14.15
GROUP 3	$ 26.65	14.15
GROUP 4	$ 25.95	14.15

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller; Batcher Plant; Bituminous Paver; Bituminous Transfer Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All Scoop; Carry Deck Crane; Central Compressor Plant; Cherry Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over); Concrete Paver; Truck-Mounted Concrete Pump; Core Drill; Crane; Crusher Plant; Derrick; Derrick Boat; Ditching & Trenching Machine; Dragline; Dredge Operator; Dredge Engineer; Elevating Grader & Loaders; Grade-All; Gurries; Heavy Equipment Robotics Operator/Mechanic; High Lift; Hoe-Type Machine; Hoist (Two or More Drums); Hoisting Engine (Two or More Drums); Horizontal Directional Drill Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau; Locomotive; Mechanic; Mechanically Operated Laser Screed; Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete; Push Dozer; Rock Spreader, attached to equipment; Rotary Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier; Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom; Telescoping Type Forklift; Tow or Push Boat; Tower Crane (French, German & other types); Tractor Shovel; Truck Crane; Tunnel Mining Machines, including Moles, Shields or similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Conrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling leads equals or exceeds 150 ft. - $1.00 over Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10%
ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0044-009 08/27/2014

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle,

Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford,
Rogers Gap, Sadieville, Skinnersburg & Stonewall)

	Rates	Fringes
IRONWORKER		
Fence Erector	$ 23.09	18.85
Structural	$ 25.65	18.85

IRON0070-006 06/01/2014

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN,
GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON,
MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER,
TRIMBLE, WASHINGTON & WOODFORD
BOURBON (Southern two-thirds, including Townships of Austerlity,
Centerville, Clintonville, Elizabeth, Hutchison, Littlerock,
North Middletown & Paris);
CARROLL (Western two-thirds, including Townships of Carrollton,
Easterday, English, Locust, Louis, Prestonville & Worthville);
CLARK (Western two-thirds, including Townships of Becknerville,
Flanagan, Ford, Pine Grove, Winchester & Wyandotte);
OWEN (Eastern eighth, including Townships of Glenmary, Gratz,
Monterey, Perry Park & Tacketts Mill);
SCOTT (Southern third, including Townships of Georgetown, Great
Crossing, Newtown, Stampling Ground & Woodlake);

	Rates	Fringes
IRONWORKER	$ 26.97	19.75

IRON0372-006 07/01/2014

BRACKEN, GALLATIN, GRANT, HARRISON and ROBERTSON
BOURBON (Northern third, including Townships of Jackson,
Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, Excluding Townships of Beechburg, Colfax,
Elizaville, Flemingsburg, Flemingsburg Junction, Foxport,
Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills,
Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar
Plains,
Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover,
Lewisburg, Mays Lick, Maysville, Minerva, Moranburg,
Murphysville, Ripley, Sardis, Shannon, South Ripley &
Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle,
Ellisville, Headquarters, Henryville, Morningglory, Myers &
Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook,
Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New
Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita &
Wheatley);
SCOTT (Northern two-thirds, including Townships of Biddle,
Davis,Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers
Gap, Sadieville, Skinnersburg & Stonewall) COUNTIES

	Rates	Fringes
IRONWORKER, REINFORCING	$ 26.25	18.45

IRON0769-007 06/01/2014

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN
CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson);
FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale);
NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout)

	Rates	Fringes
IRONWORKER		
ZONE 1	$ 31.33	21.33
ZONE 2	$ 31.73	21.33
ZONE 3	$ 33.33	21.33

ZONE 1 - Up to 10 mile radius of Union Hall, Ashland, Ky., 1643 Greenup Ave.

ZONE 2 - 10 to 50 mile radius of Union Hall, Ashland, Ky., 1643 Greenup Ave.

ZONE 3 - 50 mile radius & over of Union Hall, Ashland, Ky., 1643 Greenup Ave.

LABO0189-003 07/01/2014

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT, FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON, JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS, OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 21.80	11.96
GROUP 2	$ 22.05	11.96
GROUP 3	$ 22.10	11.96
GROUP 4	$ 22.70	11.96

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear,

Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-008 07/01/2014

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 22.71	11.05
GROUP 2	$ 22.96	11.05
GROUP 3	$ 23.01	11.05
GROUP 4	$ 23.61	11.05

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail

& Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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LABO0189-009 07/01/2014

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1	$ 22.66	11.10
GROUP 2	$ 22.91	11.10
GROUP 3	$ 22.96	11.10
GROUP 4	$ 23.56	11.10

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushammer; Chain Saw Operator; Concrete

Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

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PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:

	Rates	Fringes
PAINTER		
Bridge/Equipment Tender and/or Containment Builder	$ 18.90	5.90
Brush & Roller	$ 21.30	5.90
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 22.30	5.90
Sandblasting & Waterblasting	$ 22.05	5.90
Spray	$ 21.80	5.90

PAIN0012-017 05/01/2014

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder	$ 20.73	8.71
Brush & Roller	$ 23.39	8.71
Elevated Tanks; Steeplejack Work; Bridge & Lead Abatement	$ 24.39	8.71
Sandblasting & Water		

Blasting	$ 24.14	8.71
Spray	$ 23.89	8.71

PAIN0118-004 06/01/2014

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES:

	Rates	Fringes
PAINTER		
Brush & Roller	$ 18.50	11.97
Spray, Sandblast, Power Tools, Waterblast & Steam Cleaning	$ 19.50	11.97

* PAIN1072-003 12/01/2014

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:		
Bridges; Locks; Dams; Tension Towers & Energized Substations	$ 31.83	15.30
Power Generating Facilities	$ 28.59	15.30

PLUM0248-003 06/01/2014

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter	$ 33.00	18.95

PLUM0392-007 06/01/2014

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN & ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters	$ 29.80	17.79

PLUM0502-003 08/01/2013

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
PLUMBER	$ 32.00	17.17

SUKY2010-160 10/08/2001

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 16.57	7.34
GROUP 2	$ 16.68	7.34
GROUP 3	$ 16.86	7.34
GROUP 4	$ 16.96	7.34

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole Trailer when used to pull building materials and equipment; Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment & Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame when used in transporting materials; Ross Carrier; Forklift when used to transport building materials; & Pavement Breaker

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this

classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination

* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

These rates are listed pursuant to the Kentucky Determination No. CR-14-III- HWY dated July 14, 2014.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

PART IV

INSURANCE

INSURANCE

The Contractor shall procure and maintain the following insurance in addition to the insurance required by law:

1) Commercial General Liability-Occurrence form – not less than $2,000,000 General aggregate, $2,000,000 Products & Completed Aggregate, $1,000,000 Personal & Advertising, $1,000,000 each occurrence.

2) Automobile Liability- $1,000,000 per accident

3) Employers Liability:

   a) $100,000 Each Accident Bodily Injury
   b) $500,000 Policy limit Bodily Injury by Disease
   c) $100,000 Each Employee Bodily Injury by Disease

4) The insurance required above must be evidenced by a Certificate of Insurance and this Certificate of Insurance must contain one of the following statements:
   a) "policy contains no deductible clauses."
   b) "policy contains _____ (amount) deductible property damage clause but company will pay claim and collect the deductible from the insured."

5) KENTUCKY WORKMEN'S COMPENSATION INSURANCE. The contractor shall furnish evidence of coverage of all his employees or give evidence of self-insurance by submitting a copy of a certificate issued by the Workmen's Compensation Board.

The cost of insurance is incidental to all contract items. All subcontractors must meet the same minimum insurance requirements.

PART V

BID ITEMS

152103

PROPOSAL BID ITEMS

Report Date 3/30/15

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00190		LEVELING & WEDGING PG64-22	973.00	TON		$	
0020	01811		STANDARD CURB AND GUTTER MOD	670.00	LF		$	
0030	01876		STANDARD HEADER CURB MOD	1,611.00	LF		$	
0040	02006		REMOVE CONCRETE MEDIAN	650.00	LF		$	
0050	02058		REMOVE PCC PAVEMENT	400.00	SQYD		$	
0060	02073		JPC PAVEMENT-9 IN	400.00	SQYD		$	
0070	02562		TEMPORARY SIGNS	1,750.00	SQFT		$	
0080	02650		MAINTAIN & CONTROL TRAFFIC (FD05)	1.00	LS		$	
0090	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		$	
0100	02676		MOBILIZATION FOR MILL & TEXT (FD05)	1.00	LS		$	
0110	02677		ASPHALT PAVE MILLING & TEXTURING	17,664.00	TON		$	
0120	02720		SIDEWALK-4 IN CONCRETE	2,041.00	SQYD		$	
0130	02775		ARROW PANEL	4.00	EACH		$	
0140	02782		ADJUST TRAFFIC TREADLE (REMOVAL)	3.00	EACH		$	
0150	03240		BASE FAILURE REPAIR	70.00	SQYD		$	
0160	04793		CONDUIT-1 1/4 IN (PLANNING LOOPS)	60.00	LF		$	
0170	04793		CONDUIT-1 1/4 IN (TRAFFIC LOOPS)	227.00	LF		$	
0180	04795		CONDUIT-2 IN (PLANNING LOOPS)	30.00	LF		$	
0190	04811		ELECTRICAL JUNCTION BOX TYPE B (TRAFFIC LOOPS)	6.00	EACH		$	
0200	04820		TRENCHING AND BACKFILLING (PLANNING LOOPS)	75.00	LF		$	
0210	04820		TRENCHING AND BACKFILLING (TRAFFIC LOOPS)	227.00	LF		$	
0220	04829		PIEZOELECTRIC SENSOR (PLANNING LOOPS)	12.00	EACH		$	
0230	04830		LOOP WIRE (PLANNING LOOPS)	4,500.00	LF		$	
0240	04830		LOOP WIRE (TRAFFIC LOOPS)	16,820.00	LF		$	
0250	04895		LOOP SAW SLOT AND FILL (PLANNING LOOPS)	1,050.00	LF		$	
0260	04895		LOOP SAW SLOT AND FILL (TRAFFIC LOOPS)	8,130.00	LF		$	
0270	06510		PAVE STRIPING-TEMP PAINT-4 IN	223,200.00	LF		$	
0280	06514		PAVE STRIPING-PERM PAINT-4 IN	111,600.00	LF		$	
0290	06515		PAVE STRIPING-PERM PAINT-6 IN	400.00	LF		$	
0300	06516		PAVE STRIPING-PERM PAINT-8 IN	2,000.00	LF		$	
0310	06562		PAVE MARKING-THERMO R 6 FT	4.00	EACH		$	
0320	06563		PAVE MARKING-R/R XBUCKS 16 IN	88.00	LF		$	
0330	06565		PAVE MARKING-THERMO X-WALK-6 IN	8,700.00	LF		$	
0340	06568		PAVE MARKING-THERMO STOP BAR-24IN	2,490.00	LF		$	
0350	06569		PAVE MARKING-THERMO CROSS-HATCH	140.00	SQFT		$	
0360	06574		PAVE MARKING-THERMO CURV ARROW	145.00	EACH		$	
0370	06575		PAVE MARKING-THERMO COMB ARROW	5.00	EACH		$	

PROPOSAL BID ITEMS

152103

Report Date 3/30/15

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0380	06576		PAVE MARKING-THERMO ONLY	9.00	EACH		$	
0390	06589		PAVEMENT MARKER TYPE V-MW	100.00	EACH		$	
0400	06591		PAVEMENT MARKER TYPE V-BY	1,200.00	EACH		$	
0410	06600		REMOVE PAVEMENT MARKER TYPE V	1,200.00	EACH		$	
0420	10020NS		FUEL ADJUSTMENT	29,009.00	DOLL	$1.00	$	$29,009.00
0430	10030NS		ASPHALT ADJUSTMENT	72,862.00	DOLL	$1.00	$	$72,862.00
0440	20359NN		GALVANIZED STEEL CABINET (PLANNING LOOPS)	3.00	EACH		$	
0450	20360ES818		WOOD POST (PLANNING LOOPS)	6.00	EACH		$	
0460	20391NS835		ELECTRICAL JUNCTION BOX TYPE A (PLANNING LOOPS)	3.00	EACH		$	
0470	20997ED		REMOVE TRAFFIC ISLAND	55.00	SQYD		$	
0480	22520EN		PAVE MARKING-THERMO YIELD BAR-36 IN	15.00	LF		$	
0490	22664EN		WATER BLASTING EXISTING STRIPE	400.00	LF		$	
0500	22906ES403		CL3 ASPH SURF 0.38A PG64-22	17,664.00	TON		$	
0510	23158ES505		DETECTABLE WARNINGS (NEW)	1,572.00	SQFT		$	
0520	23625EC		PAVE MARK THERMO-6 IN W CAT TRAXX	200.00	LF		$	

Section: 0002 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0530	01708		RECONSTRUCT CATCH BASIN	4.00	EACH		$	
0540	01709		ADJUST CATCH BASIN	9.00	EACH		$	
0550	02562		TEMPORARY SIGNS	500.00	SQFT		$	
0560	02650		MAINTAIN & CONTROL TRAFFIC (FE01)	1.00	LS		$	
0570	20366NN		REPLACE GRATE	2.00	EACH		$	

Section: 0003 - MISCELLANEOUS

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0580	01792		ADJUST MANHOLE	7.00	EACH		$	
0590	03425		ADJUST WATER VALVE	24.00	EACH		$	

Section: 0004 - DEMOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0600	02569		DEMOBILIZATION	1.00	LS		$	